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ENVIRONMENTAL PROTECTION AGENCY RESEARCH AND DEVELOPMENT POSTURE HEARING

HEARING

BEFORE THE

SUBCOMMITTEE ON NATURAL RESOURCES, AGRICULTURE RESEARCH AND ENVIRONMENT

OF THE

COMMITTEE ON SCIENCE AND TECHNOLOGY U.S. HOUSE OF REPRESENTATIVES

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ENVIRONMENTAL PROTECTION AGENCY RESEARCH AND DEVELOPMENT POSTURE HEARING

THURSDAY, OCTOBER 22, 1981

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE AND TECHNOLOGY,
SUBCOMMITTEE ON NATURAL RESOURCES,
AGRICULTURE RESEARCH AND ENVIRONMENT,
Washington, D.C.

The subcommittee met, pursuant to call, at 9:30 a.m., in room 2318, Rayburn House Office Building, Hon. James H. Scheuer (chairman of the subcommittee) presiding.

MR. SCHEUER. This session of the Subcommittee on Natural Resources, Agriculture Research and Environment will come to order.

I would like to welcome our very distinguished witnesses here today: Hon. Anne M. Gorsuch, Administrator of the EPA; Dr. Andrew Jovanovich, Acting Assistant Administrator, and Dr. John Hernandez, Deputy Administrator.

Mrs. Gorsuch and her aides are here with us today to discuss the administration's policies and goals for research and development in the EPA.

This subcommittee regards R. & D. in EPA as a vital and essential function of the Agency's mission.

Over the years we have carefully monitored the program to make sure its activities are directed in the best interests of the public and we intend this hearing to continue this oversight responsibility.

In the past we have had some very grave reservations, particularly with the organization and the management of research and development activities in EPA. We are very pleased, Mrs. Gorsuch, that you have also directed your attention to the deficits in this area that we have long been concerned with and we are pleased you are taking active means to bring the organization, management, and direction of R. & D. in EPA into the 20th century.

In performing this responsibility, however, we are also concerned that we all guard ourselves against a partisan reaction based on rumor and predictions of dire consequences by those who oppose legitimate shift in the direction of the Agency's R. & D.

We will support you in the completely nonpartisan way in which this Agency has functioned to date.

I want to thank my colleague, Bill Carney, our ranking minority member, for being totally in agreement with me that there are no

politics when it comes to research and development and the environment.

We are going to protect your considered means of moving the Agency in proper directions.

Having said that, I also would have to say that there is a growing disquietude in the land, and on both sides of the committee over the severe cuts planned in the personnel and research and operating funds.

Many of us legitimately question whether the administration is using these severe budget cuts and very stringent reorganization procedures as a means of backing away from pollution control activities that have been mandated by the Congress.

I personally find it distressing that at a time when the Nation faces enormous problems with acid rain, which is polluting not only our environment, but our diplomatic relations with our neighboring Republic of Canada, when we are facing enormous problems of toxic substances, hazardous wastes, ground water contamination, which my colleague, Bill Carney, has taken leadership in addressing, and various kinds of pollution produced by energy production, that at this time in our history the administration should be or may be considering drastic measures in reducing the capability of EPA to help us meet this challenge that could jeopardize our country and its future.

It seems strange and ironic that at this time, when we are seeking massive alternatives to Persian Gulf oil, both fossil fuel alternatives produced here, as well as nonfossil fuel alternatives, that we should even be considering a cut by as much as two-thirds from the year 1981 budget.

This seems to be bizarre and almost totally inconsistent with this flat goal of achieving energy independence for our country in a way that will not jeopardize our national health or our national environment.

I take comfort in my conviction that we shouldn't do this; that energy can be produced in ways that are consistent with our health and environment.

A recent Lou Harris poll that indicates there is a formidable constituency out there supporting Federal efforts to safeguard public health and environment quality.

It is research that produces much of the information upon which all of us depend to achieve energy independence without degrading our national health and environment.

A summary of the Harris survey indicates that a clear majority of our people wish not to postpone auto emission standards, do not wish to relax current auto standards, do not wish to relax air quality standards, do not wish to relax pollution standards for powerplants to allow burning of higher sulfur containing oil and coal.

In terms of the strictness of the Clean Air Act, about half of the people, 51 percent, want to keep it about the same.

Twenty-nine percent want to make it stricter; 17 percent want to make it less strict.

You would find a balance there toward making it more strict. You certainly find no national consensus for significantly weakening the Clean Air Act so if we are being responsive to any public

mandate, I think we will at least determine to maintain the effectiveness of our environmental standards.

Without the kind of effective R. & D. we are talking about, we cannot complement our environment statutes; we cannot learn about new threats to the country or make sound environment decisions.

I look forward to this discussion with you, Madam Administrator, with the hope that positive actions, not just innocuous platitudes and glittering generalities, and empty assurances, will be forthcoming from this administration to strengthen environmental research and in turn to strengthen specific effective environmental protection efforts.

Before turning to my colleagues, I have one additional word to say about the failure of EPA to produce as a witness Dr. John Todhunter, a designee for a high office in your agency.

We requested that Dr. John Todhunter appear with you today, on October 13 and on October 20.

We were informed by EPA that Dr. Todhunter has not been as yet confirmed by the Senate and that it is Senate protocol that the designee not appear before any other committee of the Congress until he is confirmed.

Now, this is wrong and it is wrong on several accounts.

First of all, it is transcendently self-evident that Dr. Todhunter is acting in a decisionmaking capacity on the public payroll at EPA and, as such, he is accountable to Congress.

Second, the Senate subcommittee responsible for Dr. Todhunter's confirmation has advised us that they have no opposition whatsoever to his appearance before this subcommittee as a witness before he is confirmed, quite contrary to the message that we received from your congressional liaison, Jack Wooley.

Indeed, they have informed us, Dr. Gorsuch, that they were importuned by Mr. Wooley, your congressional liaison, to contact our subcommittee and to make their opposition to his appearance before this subcommittee known to us.

Now, of course, they told us that Dr. Wooley had importuned them to do this and that they had refused to do it.

I cannot imagine a more egregiously inappropriate action for a congressional liaison representative of yours to take than to mix into the affairs of the U.S. Congress and to get one House of this great body to interface in a negative way with another House.

We don't generally do that.

We especially don't need any advice from the executive branch of Government as to how we relate to each other.

We really don't, and for your congressional liaison person to try and get the Senate to act in an unfriendly or hostile way to the work of this committee is grossly improper and I hope there will be no repetition of this.

We have had more than one instance of this kind of improper action on the part of this particular official and we hope all—as you intend to run a tighter ship in many respects, keep your personnel under a tighter rein, you will have particular concern with the kind of activities that have been taking place, the kind of incidents that have been taking place with this particular official and keep him under a little bit closer control.

I must say that if its unilateral action in attempting to decide who will and who will not be a witness before a congressional committee, that is totally unacceptable to me and I don't wish to place words in the mouth of my colleague, but I believe that my colleague, Mr. Carney, finds that just as unacceptable and he is quite capable of expressing himself in that regard.

In the words of my dear friend and colleague, John Dingell, the chairman of the full committee, this action is unprecedented, presumptuous and entirely unacceptable and I wholeheartedly join in the words that he has expressed.

Now we are not going to press the issue of Dr. Todhunter's appearance through the options that are available to us, and we do have options to compel the appearances of witnesses here because he is not a central focus of today's hearing.

However, if it appears that his actions merit further inquiry by this committee, we will expect him here as a witness, Madam Administrator, whether or not he has been confirmed.

We hope we have made ourselves clear on this matter.

I think our colleagues will have more to say on this. I hope our future relations will be free of the awkwardness and embarrassment that is caused on all sides by these untoward incidents.

I hope that you and I and the rest of my colleagues on this committee will have the easy, formal, and informal communication on a very high level of effectiveness and responsiveness that I am totally positive we are all capable of.

With those words, I will yield to my distinguished, high efficient member of this committee, Bill Carney, the ranking minority member of the subcommittee.

Mr. CARNEY. I would ask unanimous consent these hearings may take place while they are being recorded both audio and visually.

Mr. SCHEUER. There being no objection, it is so ordered.

Mr. CARNEY. There are some who forget the essential genius of the American system of government is our system of checks and balances and I am fully aware that the American people elected President Reagan with the expectation he would bring sweeping changes to the Federal Government.

These changes are needed and they are long past due. We have long since passed the point where we had to reject the outmoded and unworkable solutions which have been in favor for so many years.

We cannot spend ourselves out of inflation. The only solution is economic discipline. We cannot solve our social problems by throwing unlimited sums of money at them.

We have reached a time when the American people have finally decided that they want less government. As people out in my part of Long Island say, we can't afford all the government we have been paying for but thank God we haven't been getting all we have been taxed for.

Today we begin a crucial part of the governmental process. The Constitution has created the legislative and executive branches of Government as separate but equal.

Unlike the thousands of bureaucrats and agencies in Government or even those administrators appointed by the executive

branch to make policy, each member of this committee has to face the electorate every 2 years.

The President feels that he was given a mandate last November to make certain changes, but each of us has a certificate of election from the people we represent and they have also given us a mandate to take a coequal part in shaping the policies of our Government.

There have been charges and countercharges in the media about things which are occurring within the EPA. There are partisans on each side of the issue, before us today and EPA has always been an Agency which has stirred strong passions in both proponents and opponents.

Our job today is to examine the proposed EPA research and development programs and to determine if it is adequate and proper in addressing the critical environmental questions facing our Nation today.

I am pleased to see that the new Administrator recognizes that there are serious problems in this area. For far too long EPA has, I believe, accepted shoddy science. There are a number of cases in the Federal courts where the EPA has had their regulations overturned by Federal judges based on poor, inadequate or just flat incorrect scientific data.

There is no reasonable excuse for that.

The Congress, I believe, has provided more than adequate research in both laboratories and scientific personnel to do a first-rate job.

Second-rate science just cannot be tolerated any longer.

For years this committee has been critical of EPA science. Within the past year the GAO has reported that the problem still continues. Today we will hear from a new administrator, what her evaluation of the agency is and what are her criticisms if they are indeed warranted.

For years Congress increased annual funding for EPA research and development programs with no visible improvement in any of these problem areas.

Today we will hear from the administration what they could propose to do in such important areas.

The chairman has alluded to the areas that are of great concern to this committee and I would say to the majority of the people in the Congress, those areas of importance exist.

We cannot take an ostrich attitude and think that they will go away. We have to address them and I think we have to be responsible in addressing them, knowing that we are working with a limited resource, but it is something that leaves us with the problem of making some very, very hard decisions.

Those decisions, Madam Administrator, as you have so adequately pointed out before, have to be made with coequal partners.

If the challenges are to be met by this new administration and by the Congress, it is going to have to be done in an atmosphere of cooperation.

I think the chairman has adequately addressed some of the problems that we were faced with for the first 10 months as a committee dealing with the EPA and it would be redundant for me to hash over them.

I would only hope that we could look forwrd to a sense of cooperation from the administration in this particular area, from October 22 onward because the challenges indeed are immense and they must be met.

I do not believe, as you stated before, the American people want to take steps backward in the area of clean air, clean water, in the area of any environmental issue.

I think you don't need Lou Harris. You just have to go to senior citizen meetings or town hall meetings in each and every congressional district and there is a deep understanding—at least I believe there is a deep understanding—that the American people want to continue to pursue policies that will enhance the atmosphere, enhance the environment in which we live.

We want to leave something to the generations that will follow, something about which we can be proud from the standpoint of our activity as a Congress and I am sure you can be proud of from the standpoint of your activities, as an agency.

I would just like to say I am pleased we finally do have the opportunity to publicly address these problems in our coequal responsibilities and I look forward to these meetings being productive and I hope that in the future we will have a dialog going back and forth between the House of Representative, the entire Congress and the administration.

Mr. Chairman, I thank you for the opportunity for the opening remarks.

Mr. SCHEUER. Thank you very much, Mr. Carney.

And now our distinguished colleague from California, George Brown.

Mr. BROWN. Mr. Chairman, I commend you for holding these posture hearings on the R. & D. programs of the Environmental Protection Agency.

In the past Congress worked with the administration for the improvement of the EPA's R. & D. in air, water hazardous wastes, and pesticides.

The improvement was painful and slow.

During the 4 years I was chairman of this subcommittee, I was frustrated with the rate of progress we made, but at least changes were made in the right direction.

Now, before reports of proposed fiscal year 1983 budget cuts are substantiated, we find the already approved fiscal year 1982 budget cuts dramatically reducing the agency's R. & D. capacity.

Congress was unwise in approving these cuts, as I stated in my dissenting views when the authorization bill was reported, but I am confident that it will not approve further reductions.

Justification for such actions would be hard to make in light of the fact that it is the very lack of an adequate data base that opponents of responsible regulation use to justify the weakening of standards and regulations.

The environmental data base, over and over, has been said to be deficient.

I look forward to an open dialog with the Administrator of the Environmental Protection Agency and hope she will shed some light on what impact these research budget cuts will have on the ability of the EPA to fulfill its mission.

Mr. SCHEUER. Now Congressman Al Gore, a member of the Science Committee, a member who has cooperated as chairman of the Oversight and Investigations Committee, a member who has cooperated with us. We have held joint hearings and he has been a useful contributor to the work of the committee.

Mr. GORE. Thank you very much, Mr. Chairman.

I appreciate their opportunity to participate in this hearing.

I would like to wait until all the members of the standing legislative subcommittee have had an opportunity to ask questions before I seek to impose myself, in spite of your invitation.

I do have a number of questions, however. I will keep this opening statement quite brief, but as chairman of the Investigations and Oversight Subcommittee and as a member of the Committee on the Energy and Commerce Committee which has substantial jurisdiction over EPA, I have a continuing interest in the activities of the agency, and this I anticipate to be the first of a series of hearings where questions that will be directed toward officials at EPA will be considered.

I am concerned that both the cuts that are proposed in EPA's research budget, and the direction of those cuts run counter to wise public policy that has driven our environmental programs over the last 10 years.

In addition, I am very concerned that the scientific process for reaching policy judgments is being undermined by new policy officials in the Agency who not only lack understanding of the statutes they are administering, but seem determined to ignore the advice of the technical people within EPA.

I also believe that we are beginning to see the formation of a scientific review process that ignores important views in the community about serious scientific problems, and concentrates power in the hands of organizations that would be on the receiving end of the regulations.

In light of these beliefs, I am disappointed that EPA has chosen not to honor the request of the chairman and permit the Assistant Administrator-Designate for Toxic Substances, Dr. John Todhunter, to appear as a witness.

While Dr. Todhunter does not oversee the Office of Research and Development, his programs have an important underpinning in the research done by the Agency in risk assessment.

EPA has indicated that Dr. Todhunter is not being permitted to testify because he is not confirmed. And yet the evidence is clear that he is making the day-to-day decisions in EPA about important scientific matters.

His name has appeared prominently in the Washington Post as an EPA spokesman, as has his photograph.

In memorandum after memorandum obtained by the subcommittee staff, his influence is strongly felt as he attempts to unilaterally change the Agency's policy on risk assessment and scientific review. I believe his actions reflect poorly upon the management of EPA, and it is my intention to pursue the reopening of his confirmation process in the Senate since he refuses to appear to answer questions in this forum.

I look forward to the questions and answers today and to the subsequent hearings that will be held in the near future.

I strongly believe that what is being done at EPA is contrary to the best interests of our country and contrary to the strongly held opinions of an overwhelming majority of our citizens.

Thank you for allowing me to participate today, Mr. Chairman. I am looking forward to it.

Mr. SCHEUER. Thank you, Mr. Gore.

Congressperson Claudine Schneider, a distinguished member of the subcommittee.

Mrs. SCHNEIDER. Thank you, Mr. Chairman.

I would also like to thank our witnesses, particularly Mrs. Gorsuch, for appearing today to testify regarding the future direction of the Environmental Protection Agency's research program.

As I am sure the witnesses are aware, there have been many rumors about the Agency's research plans that have caused considerable anxiety in the Congress and particularly among the members of this subcommittee whose primary focus is science and technology and research and development.

The Office of Research and Development has been given a mandate by the Congress to test, evaluate, and to develop the technology and the health based standards that are the key to the Clean Air Act and the Clean Water Act.

Without supporting research, the standards which have the overwhelming support of the American public become quite meaningless.

I intend to listen very carefully to the testimony today and I would like to hear what evidence the witnesses can offer that would indicate that private industry may assume any of the research functions that may be done by the Office of Research and Development.

I would like to hear what the Agency's plans are for testing and evaluating the environmental side effects of the emerging synthetic fuels industry, a research and development area that is of primary concern also to this committee.

If the Agency is assuming the research will be performed by private industry, I hope we will have enough concrete evidence to support that claim.

I would also like to hear how the Agency's research will continue to support the health based standards that are the backbone of the Clean Air and Water Acts.

And finally, I would like to hear how the Agency intends to use the peer review process and its science courts to promote objective scientific research.

I am concerned that peer review, as interpreted by the Agency, may be just a polite word for political censorship.

The Agency has already earned the reputation among the public for being one of the most politicized bureaucracies in Washington and I would like to hear today that that reputation is undeserved.

Thank you, Mr. Chairman.

Mr. SCHEUER. Congressman Jim Blanchard of Michigan.

Mr. BLANCHARD. Thank you, Mr. Chairman. I am delighted to arrive and find out we haven't finished the opening statements so I haven't missed anything.

We have been so busy showering Mrs. Gorsuch with encomiums and expressions of high regard and warm esteem. Do you have the rope and the tree over here?

Mr. Chairman, I think in the interest of getting to the point I should remain silent and let our witness process.

Mr. SCHEUER. Mrs. Gorsuch, you have heard our expressions of esteem and respect and our high hopes for the future.

With these welcoming remarks ringing in your ears, the floor is yours and we will be delighted to hear you.

STATEMENT OF HON. ANNE M. GORSUCH, ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, ACCOMPANIED BY JOHN HERNANDEZ, DEPUTY ADMINISTRATOR, EPA; ANDREW JOVANOVICH, ACTING ASSISTANT ADMINISTRATOR, OFFICE OF RESEARCH AND DEVELOPMENT, AND ANNE BARTON, SENIOR SCIENCE ADVISER, HAZARD EVALUATION DIVISION, OFFICE OF PESTICIDE PROGRAMS, EPA

Mrs. GORSUCH. Good morning, Mr. Chairman and members of the subcommittee.

I am pleased to meet with you today to discuss EPA's research and development program.

I would like to express personal regret that conflicting demands on my schedule prevented me from accepting your invitation at an earlier date.

I appreciate the subcommittee's effort and continuing interest in EPA's research and development program, and I hope that we may further improve communication on the scientific and technical issues at hand.

IMPORTANCE OF GOOD SCIENCE

I would like to begin by stating my strong belief that the improvement of our scientific and technical knowledge about environmental concerns is vital.

EPA must do this not only at the national level, but also at a State and local level.

As you know, the President has clearly demonstrated the importance he places on EPA's scientific performance by appointing Dr. John Hernandez as Deputy Administrator, the first time in the Agency's history that a scientist has been named to its top management.

Dr. Hernandez' personal goal of improving the science in EPA is well known.

Elected and appointed public officials are called upon almost daily to make difficult decisions on major environmental policy issues involving a great deal of scientific controversy and uncertainty.

The more uncertainty there is, the more difficult it is to estimate the proper balance between public safety on the one hand, and the often enormous costs of pollution control on the other.

We simply cannot afford to err badly in either direction. Better knowledge of the scientific and technical facts almost always reduces the likelihood of such error.

I consider EPA's research and development program to be critically important to the goal of more informed decisionmaking.

Research is expensive, but ignorance can be much more expensive. Because the resources of the Federal Government are limited, we need to use them wisely.

In the case of EPA's research program, this means we must insure several things: First-rate scientists and engineers, suitable facilities and equipment, intelligent planning, efficient management, and uncompromising professional objectivity and scientific quality assurance.

PROBLEMS FACING ORD

Soon after the Senate confirmed our appointments, John Hernandez and I initiated a detailed evaluation of the Agency's research and development program. I would like to offer some of our preliminary findings.

Accompanying me today is Dr. Andrew Jovanovich, Acting Assistant Administrator for Research and Development, who has been leading our efforts to evaluate the program.

First, the good news.

From his initial site visits to our laboratories around the country, Dr. Jovanovich has brought encouraging reports of considerable scientific and technical staff talent, good indications of professional dedication, and many excellent research facilities and equipment.

Clearly we seem to have the basic materials for a fine program.

The rest of the picture is not as bright, however. A recent management task force study done at my request estimated that up to 26 percent of EPA's total personnel are devoted to administrative matters rather than to substantive agency missions.

[Question and response follow:]

Question. Please provide the management "task force study" on the EPA R&D programs to the Subcommittee for inclusion in the record.

Response. (See Appendix A.)

Although it is difficult to break down such estimates accurately, the situation may be even worse in the Office of Research and Development, since that office is top heavy with administrators.

An astonishing 31 percent of the 230 permanent full-time employees in ORD headquarters are managers at the senior executive service or GS–15 level as compared with only 7 percent of the 1,440 people in our laboratories.

Although 86 percent of ORD's permanent full-time personnel are in the labs, the majority of its SES-level executives are in headquarters.

We find that ORD has created complex layers of headquarters managers whose interactions often result in a higher priority on paperwork than on research.

We are by no means the first to find serious problems in ORD's management and overall performance, of course.

The House Committee on Science and Technology, and this subcommittee in particular, have maintained a strong interest in EPA's research program in the past and have devoted much effort to solving its management problems.

The problems you and others have identified include a lack of responsiveness to the Agency's real research needs, ineffective and unreasonably complex planning processes, excessively cumbersome and top-heavy management, a failure to properly balance long-term research against shorter term problem-solving scientific and technical activities, and a lack of consistent scientific quality.

In the past several years, these problems have been identified over and over again, not only by this subcommittee, but also by other congressional committees, the General Accounting Office, the Office of Technology Assessment, the National Research Council, and various EPA intraagency studies.

The earliest significant evaluations of ORD's performance were made by the House Committee on Science and Technology and the Senate Committee on Public Works.

By 1974, these committees had reported serious deficiencies and a low morale among ORD's key laboratory scientists.

In response, an EPA intraagency task force developed a number of recommendations which were implemented to change the Agency's research planning process and the organization of ORD.

Despite this hopeful step, serious problems again emerged.

Between 1975 and 1977, ORD's programs were again evaluated by the Committee on Science and Technology, as well as by the Office of Technology assessment and the National Research Council.

These studies concluded that ORD's overall performance was not satisfactory and cited inadequate coordination with the Agency's regulatory program offices, insufficient attention to long-term anticipatory research, and inadequate peer review to insure scientific quality.

In response to these concerns, and a requirement in its 1978 authorization act, ORD prepared the well known Culver report that led to the establishment of today's research committee system.

The problems have persisted. During the past year the General Accounting Office has released two reports acknowledging progress in establishing better dialog between ORD and the rest of the agency, but again pointing out inadequate planning, lack of relevance, inconsistent scientific quality, and an inability to define the agency's long-range goals or needs.

Our own evaluations, under way since June, agree with yours and the others. Although a number of changes have been made in the Agency's research program in recent years, most of the same deficiencies are still with us, in many ways unchanged.

In spite of the steps that have been taken by the Office of Research and Development to address them, ORD has yet to become the responsive, respected professional research organization that we all want to see.

Low morale among key scientific staff in our laboratories still exists today, probably little changed since 1974.

The research committee system implemented in 1979 has mainly been responsible for improving the dialog between EPA's regulatory, operational, and scientific groups to focus our research activities.

But, as I mentioned, the most recent GAO report on ORD, issued this July, concluded that problems remain.

Consider, for example, an EPA regulatory program official who needs scientific information from the Office of Research and Development.

He asks the appropriate research committee, which turns that need into a research proposal.

[Question and response follow:]

Question. The EPA research planning committees, after evaluating the informational needs of the program offices, develop research strategies (e.g., Chemical Testing and Assessment Research Committee—Research Strategy 1979–1985, EPA–600/9–80–049, October, 1980). What is the purpose of these research strategies and how are they used? What is the difference and relationship between these research strategies and research "proposals"? Should the research planning committees be eliminated and, if so, what mechanism will be used by ORD and the program offices to jointly plan research and development?

Response. The purpose of research strategies is to identify the specific research products the program offices need in order to achieve their regulatory objectives. They are developed jointly by key staff from the program offices and ORD through the Research Committee system. These strategies lay out the requirements, priorities and costs of research for a three- to five-year timeframe. Research strategies are used primarily as a point of departure for the development of budget year plans which are consistent with the long-term direction of the regulatory programs. Research proposals, on the other hand, are neither a product of the research committees nor of ORD, but rather relate to the development of the research needs statements by the client offices. The process for developing research needs has been, and will continue to be, an evolutionary and time-consuming one. Client offices must first decide on their specific regulatory milestones and then determine precisely what research products must be forthcoming to promote their achievement. Since specific regulatory milestones often change as more information becomes available, the associated research products must be revised accordingly.

The Office of Research and Development is committed to planning EPA's research jointly with the program offices—its principal clients—and has used the Research Committee system to accomplish this end. We are currently in the process of examining various organizational options and management approaches which will institutionalize joint planning in ORD. The continued use of research committees is one of the options being discussed.

The committee then ranks the proposal against all others in its area. If the proposal survives, it is forwarded as a recommendation to the Assistant Administrator for Research and Development.

Then the confusion really begins.

The proposal, which typically is only one of the dozens coming from each of the 14 presently existing research committees, gets referred to ORD's headquarters office directors, and then to their subordinate division directors and staff.

They in turn respond, often rewriting the proposal while injecting their own views, interests, and understandings.

Often the proposal is also sent to one or more of ORD's laboratories for rewriting, thus adding supplemental views, interests, and levels of understanding.

If the proposal survives in any recognizable form, the Assistant Administrator and his large budget staff, who add their own touches, rank its priority in a draft decision unit.

This ranking passes through the Agency's Office of Policy and Resource Management, which refers it to me for a final determination at the Agency level.

All through this labyrinth, the proposal is modified, reviewed and remodified by the various participants in the process.

A research proposal may be reconceptualized and rewritten a dozen times or more, if it survives.

[Question and response follow:]

Question. Is the EPA research planning procedure, as described in the testimony, bad and, if so, why? What impact does this procedure have on the quality and appropriateness of an EPA research proposal and the program as a whole?

Response. EPA's current research planning procedures were developed to provide ORD with a mechanism for jointly planning the research required to support the multifaceted needs of the program offices. While in retrospect this system has been more cumbersome than necessary, it has gone a long way toward making ORD more responsive to its clients' needs. We are currently reviewing the entire planning process to determine where it can be streamlined and made more effective. This review should produce recommendations to allow ORD to build on the progress made thus far under the current system for jointly planning research.

The laboratory selected to implement the proposal must continuously monitor the changes at each step since Federal procurement practices for personnel, contracts, equipment, and facilities require long lead times that a laboratory must try to anticipate.

The official who originally requested the research must wait an average of 18 months from the time of the request until the laboratory can begin work on it; this assumes that the requestor is still interested, that delay and regulatory changes haven't rendered the need obsolete, and that the proposal is still recognizable.

[Question and response follow:]

Question. What will be the role or purpose of research and development in EPA under this Administration? Should EPA R&D direction be determined by statutory requirements or by the nature of existing environmental problems? How much attention will be given to long-term, continuing research efforts that ends when desired information about an environmental problem is developed?

Response. The role of research and development will continue to be generation of sound scientific information for regulatory decision-making and technical assistance in health and environmental problem solving. We hope, by creating a much closer link between the actual research scientists and the client decision-makers, to improve ORD's ability to deliver these essential services. At the same time, this closer link will make it more difficult for the research program to stray into areas of work which are irrelevant to the mission of the Agency and the client needs. This does not mean, however, that the directions of the program will be determined entirely by statutory requirements or that the need for long-term research will be forgotten.

The responsibility of the applied research scientist to his client often extends far beyond delivery of a research product. The client often benefits the most from having sound technical advice readily available and from the increase in his own knowledge of how science can assist in solving his problems. While ORD's research program will be changed by a closer and more effective link to the regulatory programs, the regulatory programs will be changed as well. An important benefit of a closer working relationship between the regulatory decision-makers and ORD scientists we expect will be a better understanding of and support for long-range research. In addition, the results of such research should be anticipated in setting regulatory schedules and more effectively incorporated in the eventual rulemaking.

On top of this, one must add up to a year for detailed planning and procurement lead time.

Mr. SCHEUER. At the time it takes 2.5 years to get a proposal for research approved.

Mrs. GORSUCH. Yes, Mr. Chairman, under the present process.

Mr. SCHEUER. Almost unbelievable.

Mrs. GORSUCH. I agree.

Subsequently, doing the actual work requires its own time before the regulatory program's needs can be met, of course, but this often takes less time than the approval process.

It is not hard to see why external evaluators have criticized ORD's responsiveness to the research needs of the agency, or why many regulatory program officials have all but given up trying to obtain useful responses from ORD.

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Moreover, lobbying is often found to be a more effective tactic than either legitimate needs or sound research.

If ORD makes a decision adverse to a favorite research project, numerous ways have historically been found to circumvent the system and overturn the decision, regardless of overall agency or national priorities.

Although many people in ORD do their job well, the present system seems to encourage building or protecting existing organizations and activities without regard to real research needs.

All of this is tragic. As I mentioned earlier, EPA has more than its share of capable, dedicated scientists who are struggling to provide the high quality research and technical information needed by the Agency. But they are burdened by an astoundingly complex and cumbersome management system and a budget planning process that seem more to frustrate than support their efforts.

As the administrative practices in ORD headquarters have grown, so have the complexity and overall effort devoted to the budget and planning process.

Today there are approximately 916 managerial, administrative, and clerical employees in ORD, representing about 40 percent of the organization's total personnel.

[Question and response follow:]

Question. How much EPA funding in fiscal year 1980, fiscal year 1981, and fiscal year 1982 supports extramural research and inhouse research? What is the relationship between the mix of ORD personnel and their functions and the level of extramural research sponsored by EPA? Would a more cost-effective and high quality EPA research program result from a shift toward more inhouse research and less extramural research? Explain."

Response:

	In-house	Extramural
Fiscal Year 1980 (yearend allowances)	104,984.8	228,951.0
Fiscal Year 1981 (yearend allowances)	102,163.8	234,956.1
Fiscal Year 1982 (pending operating plan, 12 percent reduction applied)	89,372.6	167,759.0

In the past ORD has attempted to balance its extramural and inhouse research in order to have the most effective program possible and to achieve the most efficient utilization of personnel and funds. A high level of extramural research requires many employees to act as project officers on grants, contracts, cooperative agreements, etc. These employees need a scientific background in order to effectively design and monitor the extramural projects for which they are responsible. They also need a knowledge of contract/grant procedures and management experience. Thus, the knowledge and skills required of a project officer are not significantly different from those required of an inhouse researcher.

It is difficult to say whether a more cost effective and high quality research program would result from a shift toward more inhouse and less extramural research. ORD has tried to balance its inhouse and extramural research in order to have the most effective program possible and to fulfill the requirements of OMB Circulars A-76 and A-120. ORD needs a certain amount of inhouse capability, particularly for project monitoring and in the areas of innovative and long-term research. However, there are a number of new areas of high priority research where work needs to be done quickly and ORD does not have the scientific capability to perform the research. In these circumstances, it is more cost effective to have a contractor or grantee perform the work, primarily due to the time and effort it takes to develop an inhouse capability. Thus, both inhouse and extramural research are necessary for a responsive, high quality program.

As ORD's extramural funds have been reduced in fiscal year 1981 and fiscal year 1982, a shift toward more inhouse work is occurring. ORD is currently studying plans for a reorganization. The conclusions of the study and final action on ORD's

budgets for fiscal year 1982 and fiscal year 1983 will determine the direction of ORD's research program.

Their administrative work in turn requires more paperwork from ORD's scientific and technical personnel, usually at the expense of research.

In fact, one of our laboratory directors recently stated that he must spend about 70 percent of his time, not to mention travel costs, on administrative matters instead of managing research, largely in dealing with several bosses in headquarters, plus with different research committees with 16 cochairmen, plus all the other aspects of the present budget and planning maze.

BLUEPRINT FOR IMPROVEMENT

We owe it to the American public, to the fine scientists in ORD, and to the rest of the Agency, to correct these problems.

Nobody can direct scientists to produce creative ideas or quality science, but we certainly can reorient the management system that can stifle their potential for excellent contributions.

After more than a decade, EPA's research and development program by now should be a responsive, respected professional research organization able to provide the high quality scientific and technical information needed by the Agency and by State and local governments.

We are well aware that each previous administration has tried to solve the persistent problems of ORD and failed.

We have a chance to succeed, if we approach the job with uncompromising candor and a strict intolerance of self-interest in the status quo.

We are trying to learn from the earlier failures and from the knowledge of senior career staff in the agency.

To begin improving ORD, we recently convened a special advisory group to design and carry out innovative measures for correcting the Agency's research planning and management problems.

We appointed a mix of senior scientists and career managers to this group, chosen from both the laboratories and headquarters. Interestingly, the group has already reached an early consensus on major problems in ORD.

Such accord within the Agency's senior career staff will go a long way toward changing what we need to change and preserving what works well.

In addition to the problems already identified by external evaluators, the advisory group has concluded that widespread, unconstructive competition for resources exists within ORD, and that there are unproductive, paper-intensive management practices nurtured by an excessively large staff in Washington, a lack of strategic planning, and an atmosphere of continual crisis management.

[Question and response follow:]

Question. Please submit to the Subcommittee the report prepared by the "special advisory group" who evaluated EPA's research program.

Response. The Special Advisory Group to the Office of Research and Development (ORD) has not yet completed its report on ORD organization and management. We anticipate that the report will be finalized and through Agency review and approval by February 1982. We will make the report available to the Subcommittee as soon as it is approved.

We have identified several goals for change. The first and most important goal is scientific quality.

The soundness of what we do in EPA is based on the scientific information available to us.

In order to improve quality, we intend to reorient and strengthen the peer review process. But such changes will not necessarily promote or stimulate creativity.

[Question and response follow:]

Question. Describe how the EPA R&D peer review process will be reoriented and how it will strengthen EPA's research program.

Response. ORD has had an internal peer review process for some time that in effect did not differ markedly from that circulated for Agency comment by Deputy Administrator John Hernandez on July 28, 1981. The purpose of the peer review process is to improve the scientific and technical quality of materials distributed by EPA. The process is intended to provide uniform guidance to Agency officials for the review of literature published in the Agency's name and by its employees when they are acting in an official capacity.

On October 29, 1981, Dr. Hernandez discussed the proposed Peer Review Process with the Executive Committee of the Science Advisory Board. Board members generally supported the purpose of this process but suggested a few minor modifications. Dr. Hernandez agreed to modify the proposed process prior to final approval by the Administrator.

The peer review process developed by the Office of Research and Development will be consistent with the Agency-wide process. The Administrator has approved the Agency-wide policy, and a copy is attached as Appendix B.

For this reason, we will also be evaluating ORD's present incentive systems. We need to provide a climate in which our best scientists can achieve substantial recognition and reward when they excel and solve problems, not just when their programs grow in size.

[Question and response follow:]

Question. What is the current attrition rate for EPA research personnel and how does this compare to attrition rates in 1981 and 1980? What is EPA doing to attract and retain good research personnel and to provide an atmosphere necessary for doing good, credible research work?

Response. The Office of Research and Development (ORD) currently has approximately 1,034 highly qualified scientists on board. Since January 1, 1981, a total of 55 (5.3 percent) scientists left ORD. In 1980, ORD had a total of 1,121 scientists on board of which 70 left (6.2 percent).

ORD's management is concerned about keeping good research personnel. ORD is attempting to retain its highly qualified scientists and to provide the atmosphere necessary for doing good, credible research. The office is currently studying a reorganization proposal aimed at streamlining the operation and eliminating any excessive management layering. It is hoped that this reorganization will improve morale in headquarters and the laboratories and will allow us to identify critical vacancies. Once these are identified and a new organization structure is decided upon, we feel that we will be able to attract the needed scientific expertise to make ORD's research program respected and responsive to Agency needs.

OFFICE OF RESEARCH AND DEVELOPMENT HEADQUARTERS, PERMANENT FULL-TIME POSITIONS, GS–15, GS–16, AND SES, LISTED BY ORGANIZATION

Position title	Grade
Immediate Office of the Assistant Administrator:	
Management analyst	GM–343–15.
Office of Research Program Management:	
Director, Office of Research Program Management	ES–340–05.
Deputy Director for Operations	ES–340–04.
Chief, Planning Staff	GM–345–15.
Director, Regional Services Staff	GM–819–15.

OFFICE OF RESEARCH AND DEVELOPMENT HEADQUARTERS, PERMANENT FULL-TIME POSITIONS, GS–15, GS–16, AND SES, LISTED BY ORGANIZATION—Continued

Position title	Grade
Chief, Technical Information Staff	GM–301–15.
Office of Exploratory Research:	
Director, Office of Exploratory Research	ES–401–05.
Environmental Scientist	GM–1301–15.
Environmental Health Scientist	GM–601–15.
Environmental Scientist	GM–1301–15.
Biological Scientist	GM–401–15.
Senior Operations Research Analyst	GM–1515–16.
Office of Health and Environmental Assessment:	
Director, Office of Health and Environmental Assessment	ES–1301–04.
Assistant Director for Planning	GM–1301–15.
Executive Director, Carcinogen Assessment Group [1]	ES–.
Supervisory Environmental Health Scientist	GM–601–15.
Statistician (Biology)	GM–1530–15.
Toxicologist	GM–401–15.
Veterinary Medical Officer	GM–701–15.
Executive Director, Exposure Assessment Group	ES–801–01.
Executive Director, Reproductive Effects Assessment Group	ES–401–01.
Office of Monitoring Systems and Quality Assurance:	
Director, Office of Monitoring Systems and Quality Assurance	ES–1301–05.
Deputy Office Director for Monitoring Systems and Quality Assurance	ES–1412–04.
Environmental Scientist	GM–1301–15.
Environmental Scientist (Monitoring Systems)	GM–1301–15.
Environmental Protection Specialist (Monitoring)	GM–028–15.
Environmental Scientist	GM–1301–15.
Director, Air, Toxics and Radiation Monitoring Research Division	ES–1301–03.
Environmental Scientist	GM–1301–15.
Chemist	GM–1320–15.
Director, Water and Waste Management Monitoring Research Division	ES–801–04.
Environmental Scientist	GM–1301–15.
Environmental Scientist	GM–1301–15.
Regional Monitoring Program	GM–1301–15.
Office of Environmental Engineering and Technology:	
Director, Office of Environmental Engineering and Technology	ES–04.
Director, Office Director for Environmental Engineering and Technology	ES–04.
Director, Waste Management Division	ES–04.
Supervisory Sanitary Engineer	GM–819–15.
Supervisory Environmental Engineer	GM–819–15.
Director, Energy Processes Division [1]	ES–.
Environmental Scientist	GM–1301–15.
Chemical Engineer	GM–893–15.
Environmental Engineer	GM–819–15.
Environmental Engineer	GM–819–15.
Chemical Engineer	GM–893–15.
Director, Industrial and Extractive Processes Division	ES–03.
Environmental Engineer	GM–801–15.
Environmental Scientist (Energy)	GM–1301–15.
Environmental Engineer	GM–819–15.
Supervisory Environmental Scientist	GM–1301–15.
Environmental Engineer	GM–1301–15.
Environmental Scientist	GM–1301–15.
Office of Environmental Processes and Effects Research:	
Director, Office of Environmental Processes and Effects Research	ES–04.
Deputy Director, Office of Environmental Processes and Effects Research	ES–04.
Environmental Scientist	GM–1301–15.
Environmental Scientist	GM–1301–15.
Supervisory Environmental Scientist	GM–1301–15.
Environmental Scientist	GM–1301–15.
Director, Energy and Air Division [1]	ES–.
Supervisory Environmental Protection Specialist	GM–028–15.
Environmental Scientist	GM–1301–15.

OFFICE OF RESEARCH AND DEVELOPMENT HEADQUARTERS, PERMANENT FULL-TIME POSITIONS, GS–15, GS–16, AND SES, LISTED BY ORGANIZATION—Continued

Position title	Grade
Director, Integrated Pest Management Program	ES–04.
Director, Water and Land Division	ES–04.
Director, Toxics and Pesticides Division	ES–04.
Office of Health Research:	
Director, Office of Health Research[1]	ES–.
Deputy Director, Office of Health Research	ES–04.
Environmental Scientist	GM–1301–15.
Environmental Scientist	GM–1301–15.
Director, Air Noise and Radiation, Health Research Division	ES–.
Director, Water and Toxics Substances, Health Research Division	ES–.
Toxicologist	GM–401–15.

[1] Vacant.

Along with scientific quality we must insist upon relevance in research. This topic must assume increasing importance in the coming years as we deploy the Agency's resources to yield the maximum health, environmental, and economic benefits.

I expect rigorous evaluations of ORD's relevance to the Agency's regulatory programs. This does not mean that we will devote all of our energies to short term, highly applied or routine projects.

We recognize the need for long-term research, not only to advance the state of science and our knowledge, but also to provide the base of expertise for our shorter-term scientific needs.

We want to strengthen the ways in which we insure the relevance of the long-term research as well as the rest of the program.

As I mentioned earlier, we are also interested in moving ORD toward a faster response time, with a greater portion of resources devoted to real research, and less to paper pushing and administrative trivia. More effective, less cumbersome research planning and management will not only free our scientists from wasteful procedural burdens, but also help to maintain continuity in EPA's research programs.

Well planned change is necessary in any research program, but continual chaotic change resulting from poor planning can paralyze research capability, since each laboratory requires significant lead time to acquire the scientific skill mix, equipment, and experience needed to do its job well.

To improve our planning, we are relying heavily on the special advisory group. They have been asked to prepare options for reconfiguring ORD and reorienting certain communications and reporting channels, including those between the laboratories and ORD headquarters, and among the laboratories, research committees, and regulatory offices.

In general, we anticipate that reductions in the number of management layers and administrative staff are necessary to preserve ORD's scientific staff.

We also preceive a need to simplify the planning system, increase the authority and accountability of laboratory directors, consolidate and upgrade laboratory program reviews, improve the relevance of research grants to EPA's needs, improve ORD's informa-

tion management systems, and provide a framework of strategic planning guidance at the beginning of each annual planning cycle.

I shall await the advisory group's findings before making any specific determinations.

I have confidence in their ability to find sensible answers to the problems identified and expect a report from the group by the end of the year.

I might also add that at the same time the Inspector General's office is undertaking a major audit of ORD's extramural research efforts.

This audit, which should take about 8 months, should provide useful information for evaluating our extramural programs.

The audit findings will be considered by the special advisory group, as well as by other senior people in the agency.

RESPONSE TO CONGRESSIONAL CONCERNS

Mr. Chairman, the Science and Technology Committee and your subcommittee in particular, has expressed continuing interest in a number of activities in EPA's research and development program.

I would like to turn now to those interests and respond to some of the more specific questions and concerns raised in your recent letters to me, regarding certain research efforts and past decisions on the ORD program.

I would like first to discuss your concerns about reductions in the research grants, water quality, energy, health and engineering programs.

[Question and response follow:]

Question. What are the specific reductions for ORD, in dollar amounts and as a percentage of expenditures by media and ORD program office, that have been proposed in the fiscal year 1982 budget amendments?

Response:

U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF RESEARCH AND DEVELOPMENT—BUDGET AMENDMENTS TO FY 1982 OPERATING PLAN (R. & D. APPROPRIATION)

[Dollar amounts in thousands]

Medium/Office	Reduction	Percent of fiscal year 1982 operating plan
Air:		
Technical information and liaison	(1)	—
Health and environmental assessment	(1)	—
Monitoring systems/quality assurance	$588.8	9.4
Health research	1,645.9	14.4
Environmental engineering and technology	1,099.6	38.7
Environmental processes and effects	196.0	1.4
Air medium total	3,530.3	9.9
Water quality:		
Technical information and liaison	(1)	—
Health and environmental assessment	111.8	16.6
Monitoring systems/quality assurance	547.7	16.7
Health research	424.4	9.6
Environmental engineering and technology	1,005.8	7.4
Environmental processes and effects	(1)	—

U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF RESEARCH AND DEVELOPMENT—BUDGET AMENDMENTS TO FY 1982 OPERATING PLAN (R. & D. APPROPRIATION)—Continued

[Dollar amounts in thousands]

Medium/Office	Reduction	Percent of fiscal year 1982 operating plan
Water quality medium total	2,089.7	8.6
Drinking water:		
Technical information and liaison	(1)	—
Health and environmental assessment	(1)	—
Monitoring systems/quality assurance	89.0	12.4
Health research	225.3	2.6
Environmental engineering and technology	(1)	—
Environmental processes and effects	(1)	—
Drinking water medium total	314.3	1.5
Hazardous waste:		
Technical information and liaison	(1)	—
Health and environmental assessment	(1)	—
Monitoring systems/quality assurance	131.9	2.6
Environmental engineering and technology	(1)	—
Environmental processes and effects	(1)	—
Health research	(1)	—
Hazardous waste medium total	131.9	.6
Pesticides:		
Technical information and liaison	(1)	—
Monitoring systems/quality assurance	(1)	—
Health research	(1)	—
Environmental processess and effects	661.9	100.0
Pesticides medium total	661.9	70.1
Radiation:		
Technical information and liaison	(1)	—
Monitoring systems/quality assurance	(1)	—
Health effects	(1)	—
Interdisciplinary: Exploratory research	189.8	4.5
Toxic substances:		
Technical information and liaison	(1)	—
Monitoring systems/quality assurance	91.0	2.3
Health research	2,267.7	22.8
Environmental engineering and technology	(1)	—
Environmental processes and effects	846.6	14.2
Toxic substances medium totals	3,614.3	15.3
Energy:		
Technical information and liaison	(1)	—
Exploratory research (acid rain)	(1)	—
Environmental engineering and technology	9,430.0	31.4
Environmental processes and effects	2,913.8	15.8
Energy medium total	12,343.8	21.5
Office subtotals:		
Technical information and liaison	(1)	—
Exploratory research	189.8	1.3
Health and environmental assessment	111.8	6.9
Monitoring systems/quality assurance	1,448.4	7.5
Health research	4,972.3	12.7
Environmental engineering and technology	11,535.4	16.4

U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF RESEARCH AND DEVELOPMENT—BUDGET AMENDMENTS TO FY 1982 OPERATING PLAN (R. & D. APPROPRIATION)—Continued

[Dollar amounts in thousands]

Medium/Office	Reduction	Percent of fiscal year 1982 operating plan
Environmental processes and effects	4,618.3	10.2
ORD grand total	22,876.0	12.0

[1] No change.

As you know, the administration has announced a 12-percent reduction in fiscal 1982 programs, with further possible reductions predicted for fiscal 1983.

Since EPA is not exempt from these goals, we have critically examined our situation on an Agency-wide basis. Because our research programs must be in harmony with the agency's overall efforts, our research priorities must parallel those of the rest of the agency.

[Question and response follow:]

Question. Explain how research results will be used by the Agency. Will EPA policy determine the direction of its research or will the Agency's policies and proposals determine the direction of EPA R&D?

Response. EPA research results will be used to provide a sound scientific basis for regulatory decision-making and to provide technical assistance in health and environmental problem solving. A closer link between the research scientists and their clients does not mean that EPA policy will determine the direction of research or that results will be influenced by policy. It is important that scientific objectivity and high quality be achieved by our research programs. It is expected that a closer link between the scientists and the regulators will enhance the role which science plays in determining overall Agency direction and will provide better access to scientific information when policy decisions are made.

For example, in fiscal 1982, we show a reduction in water quality research from the fiscal 1981 level. This involves a shift away from research on conventional water pollutants to expand in areas of increasing interest such as groundwater research.

This is also true in the energy and engineering programs.

[Question and response follow:]

Question. What are EPA's statutory requirements for promulgating technology-based standards? What is the Agency's policy with respect to developing and demonstrating pollution control technology and how does this policy differ from the policy of the last Administration? List the resource expenditures, in personnel and funding, for engineering/control technology research in fiscal year 1980, fiscal year 1981, and fiscal year 1982 by media.

Response. The Clean Water Act is the EPA statute that most emphasizes technology-based standards. Under sections 301, 304, and 307, EPA must publish "effluent guidelines" that require a given degree of treatment technology for existing "point sources" of water pollution. These guidelines must require installation of the "best practicable" control technology in 1977 and, depending on the nature of the wastes, either the "best available" or "best conventional" technology by 1983.

Publicly owned treatment facilities must achieve parallel technology-based treatment levels.

Under section 306, technology-based standards must also be set for "new" sources of water pollution, and under section 307 industries that discharge into treatment works must meet "pretreatment" requirements analogous to those that would apply if they discharged directly.

Where the Clean Air Act is concerned, section 111 requires EPA to set technology-based standards for many new sources of air pollution, and similar requirements are

imposed, through permit requirements, even in the absence of an applicable new source performance standard, on all "major" new or modified sources of air pollution. See CAA secs. 165, 169, 171 and 173.

Similarly, the requirements for control of "mobile sources" of air pollution, such as cars and trucks, are very largely established on the basis of technological considerations. See CAA sec. 202.

These are the only significant EPA statutory provisions that directly require technology-based standards. All the others either give EPA considerable discretion on what approach to pick, or require EPA to tailor its regulations to protect directly against threats to human health and welfare.

Technology development and demonstration in the past have involved major (full size) capitalized equipment acquisition by the Agency for testing at industrial sites. These facilities were, if successful, purchased by the host industry. Because of the risk inherent in process development, many such demonstration facilities were not purchased by industry. A recent example of this general approach is the energy pollution control technology development program in which major equipment has been designed, purchased and installed by EPA at power plants for testing.

Our present approach is to foster and support control technology development by the private sector. We partially fund, through co-operative agreements, pilot-scale evaluations of innovative technologies. We partially fund, again through co-operative agreements, evaluations of full-scale technologies installed by industry. We also maintain mobile pilot-scale technologies in-house for use by industry in evaluating the efficacy of various treatment technologies in their particular wastewaters. Finally, our entire effort is oriented toward technology transfer, through dissemination of the knowledge gained, through conferences co-sponsored with industry, and through our interaction with the Regions and States.

A table is attached showing resources by media for fiscal years 1980–1982.

RESOURCES FOR ENGINEERING/CONTROL TECHNOLOGY RESEARCH

[In thousands of dollars]

Medium	Fiscal year 1980 expenditures				Fiscal year 1981 expenditures				Fiscal year 1982 budgeted			
	PFTE	OPFTE	S. & E.	R. & D.	PFTE	OPFTE	S. & E.	R. & D.	PFTE	OPFTE	S. & E.	R. & D.
Air	18.1	13.3	1,753.3	2,932.1	18.1	13.3	923.5	1,732.5	18.1	13.3	1,010.3	1,741.9
Water quality	127.1	38.0	5,641.8	20,520.5	114.9	28.9	5,147.1	12,981.4	100.5	23.7	4,850.2	12,322.6
Drinking water	49.0	18.0	1,985.4	4,709.0	49.2	14.1	2.378.8	8,904.7	54.0	19.2	2,471.3	6,672.8
Solid waste	20.0	13.0	1,146.1	7,290.2	21.5	10.0	2,422.6	15,679.4	38.5	18.3	2,160.6	14,718.5
Toxics	11.5	2.7	471.2	2,233.4	4.0	—	524.9	1,244.7	11.5	2.7	528.8	1,107.9
Energy	133.2	60.1	7,964.8	38,936.7	125.4	55.9	7,641.6	34,322.3	124.0	56.3	7,377.1	22,289.2
Program management	4.0	—	102.0	—	3.1	—	99.5	—	2.1	—	66.6	—
Total	362.9	145.1	19,064.6	76,621.9	336.2	122.2	19,138.0	74,865.0	348.7	133.5	18,464.9	58,852.9

In these areas, thorough evaluation of the programs revealed that some research activities were not well coordinated with our research in other areas and were not producing benefits commensurate with their cost.

For example, projects on drinking water and toxic substances were simultaneously being funded in both the energy program and the base research program. Analysis revealed that the additional energy program expenditures for some of these projects were not justified by the research contributions they provided to meet overall Agency needs.

The reductions in our health research program were similarly analyzed to insure minimum program disruption in those areas where we have solid research capability.

The decision to target a significant portion of the health research reductions in the chronic epidemiology program resulted from several technical and managerial considerations and discussions with epidemiologists.

First, the use of epidemiological studies for regulatory purposes is both complex and expensive.

Scientific talent in this area is relatively scarce and difficult to obtain. Building EPA's in-house epidemiology program to an adequate level of performance would have required a substantial increase in personnel and funds.

Other agencies, such as the National Institutes of Health, are better equipped than EPA to conduct such studies, and EPA also has the option of obtaining additional asistance from well-qualified institutions through extramural mechanisms such as our Epidemiology Center of Excellence at the University of Pittsburgh.

The decision to reduce our in-house epidemiology program was actually based on analyses conducted prior to any involvement by the present administration, and our more recent evaluation confirmed that decision.

[Question and response follow:]

Question. What are EPA's statutory requirements for promulgating health-based standards? Are health effects data obtained from epidemiological studies necessary for human health standards required by various environmental statutes? How will EPA obtain epidemiology data from other agencies that will satisfy EPA's needs for this type of information. Explain the nature of toxicology population studies and how the information resulting from these studies will be used in setting health based standards? List the resource expenditures, in personnel and funding, for EPA health effects research in fiscal year 1980, fiscal year 1981, and fiscal year 1982 by media and by type of health research (e.g., animal studies, clinical studies, epidemiology research, etc.

Response. Protection of human health—generally coupled with protection of other environmental values—plays a major role in each of EPA's major regulatory statutes. Regulation of existing sources under the Clean Air Act—and in some cases, regulation of new sources—is tied to attaining "ambient air quality standards" which in turn are set at levels necessary to avoid adverse health impacts. CAA §§ 109, 110. The Clean Air Act also authorizes more particularized regulation of sources of "hazardous" air pollutants, namely, those whose emissions are more dangerous than the pollutants for which general ambient standards have been established. CAA § 112.

Under the Toxic Substances Control Act and the Federal Insecticide, Fungicide and Rodenticide Act, EPA regulation of chemicals must be based on whether the regulatory action at issue is reasonable after weighing the logically relevant factors, such as risk to health, impact on the economy, and the like. This in turn requires EPA to designate the health or environmental values it is attempting to protect before it takes action. TSCA § 6, FIFRA §§ 2(bb), 6.

Under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, EPA can only require treatment or disposal methods for hazardous waste that may be "necessary to protect human health or the environment." RCRA § 3005. Similarly, standards established for drinking water and underground injection control under the Safe Drinking Water Act must be aimed at protecting public health. SDWA §§ 1412, 1421.

Under the Clean Water Act, designated "toxic" pollutants, picked largely on the basis of the health concerns Congress thought them to present, must be regulated more tightly than other pollutants, and in all cases sources must be regulated as tightly as needed to meet water quality standards, which in turn are based partly on health concerns. CWA §§ 307, 301, 303.

EPA must continue to rely upon epidemiological, as well as other types of data, to support regulations. In order to provide for epidemiology research in the future, the Agency has already begun to strengthen our liaison with other Federal agencies responsible for conducting large scale analytical epidemiology studies. We will work to assure that environmental variables of concern to EPA's regulatory programs are included in these studies and assessed in relation to other variables. Improved co-

ordination between agencies will not only increase our understanding of the many factors involved in disease etiology, but also encourage the agencies involved to use their strengths to the best advantage.

In addition to our own epidemiological data, EPA can obtain high quality data from a number of cooperating agencies, as well as work done by universities, state agencies, and foundations. EPA's efforts represent only part of the total epidemiological research and activity of the Federal government. (See Table 7 below from a preliminary report by the Task Force on Environmental Cancer and Heart and Lung Disease.)

Population Toxicology (referred to as "toxicity population studies" in the above question) is defined as the development and application of techniques to directly measure or estimate effective dose and indicators of response in human subjects exposed to low levels of environmental chemicals in order to improve the scientific basis for EPA's risk assessments. Methods and protocols will be developed to (1) use samplable human tissues as an integrator of important chemical exposures, and (2) identify specific biological indicators of both acute and chronic health effects which can be reliably measured in individuals within a population. The early phases of this research will be largely animal work.

The question when a regulation is necessary or sufficient to protect public health under the various statutory provisions is, in our opinion, a scientific and policy question that should not be subject to artificial legal constraints. For that reason, we have never believed that epidemiological data is necessary as an absolute matter for setting such a standard, though it might be needed in a particular case. Other data, such as animal tests, could be used instead if scientific judgment could concur that they were enough to raise a reasonable health concern. In fact, EPA in the past has taken a number of regulatory actions based primarily on animal data.

Similarly, there is no single "correct" way to use this data. Any data that is useful to qualified persons in assessing risk may legitimately be part of the ultimate policy decision on whether or how much to regulate.

The attached table provides a detailed breakout of resources in thousands of dollars and work years for the health effects research program. The fiscal year 1981 figures are end-of-year data reflecting all approved reprogrammings and includes the funds that were restored after the rescission bill was denied. The fiscal year 1982 figures are the pending budget plan which reflects the recent 12 percent reduction. Similar data by the type of research conducted is not currently available.

[Dollar amounts in thousands]

	Fiscal year 1980		Fiscal year 1981		Fiscal year 1982	
	Total PFTE	Total	Total PFTE	Total	Total PFTE	Total
Air	205.5	$23,773.6	123.6	$22,660.8	124.5	$15,746.4
Water quality	50.1	6,308.5	46.1	5,751.6	49.4	5,813.3
Drinking water	72.7	11,323.6	66.9	11,122.4	66.9	10,998.9
Pesticides	111.9	6,061.4	54.8	3,117.9	39.3	1,835.7
Radiation	33.6	2,768.4	32.9	2,479.6	30.4	2,203.5
Chemical testing	32.3	7,691.7	48.8	9,798.7	49.8	12,259.0
Hazardous waste	0	0	1.9	729.7	1.9	1,207.1
Program management	13.0	340.0	10.2	284.1	10.5	290.4
Energy	1.7	3,239.1	0	1,749.9	0	400.0
Interdisciplinary	2.0	1,348.1	0	300.0	0	300.0
Total	520.8	62,854.4	385.2	57,994.7	372.7	50,754.3

TABLE 7.—FUNCTIONAL GROUP B, HUMAN EFFECTS—CATEGORY 7, EPIDEMIOLOGY

[In thousands of dollars]

	Case-control studies																			
	Occupational				General public				Laboratory studies				Statistical support				Record systems[1]			
	C	H	L	U	C	H	L	U	C	H	L	U	C	H	L	U	C	H	L	U
Agency:																				
CDC	33	18	145	71	556	113	278	470	148	38	17	348	0	0	0	0	0	0	0	0
EPA	136	0	0	557	727	269	25	791	92	0	0	734	0	0	0	440	0	0	0	0
FDA	0	0	0	0	248	234	54	242	20	0	0	30	0	0	0	191	0	0	0	0
NCHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	0	0	0	759
NCI	1,433	0	0	0	33,545	0	0	30	1,999	0	0	0	4,470	0	0	0	0	0	0	0
NHLBI	0	269	51	0	0	5,956	800	0	0	621	51	0	0	1,855	1,341	0	0	0	0	0
NIEHS	341	0	153	33	796	0	844	314	22	0	131	868	215	0	0	350	0	0	0	0
NIOSH	1,909	112	1,477	1,470	100	0	0	0	324	0	131	106	0	0	174	376	0	0	0	0
Total	3,852	399	1,826	2,131	35,972	6,572	2,001	1,847	2,605	659	330	2,086	4,685	1,855	1,515	1,424	0	0	0	759

[1] National probability surveys.
Key to symbols: C = Cancer, H = Heart, L = Lung, U = Unspecified.

Mrs. GORSUCH. Regarding extramural programs, I would like to allay your concerns about EPA's research grants program. Congress called for research funds to be devoted to long-term research, and we plan to meet that intent.

I have expressed my concerns, along with many of EPA's laboratory scientists, that the management and directions of that program have been too isolated from the rest of the agency.

In fact, we hope to improve our program by increasing the relevance of funded long-term research to the Agency's mission needs.

In response to your continuing concern about acid rain, groundwater contamination, and aquatic weeds, I would like to offer the following:

First, ORD developed a program on acid deposition several years ago, and the program is now readily identifiable in the budget submission to the Congress.

The known and potential effects of acid deposition continue to be of concern to us, although the magnitude and complexity of acid deposition render quick or simple solutions unlikely.

Further refinements in our current information are necessary before we can predict the extent to which emission controls on various sources will or will not reduce acid deposition in sensitive areas.

We expect our research program to help achieve such a capability.

Concerning our groundwater research, I am pleased on two accounts.

First, I note from the committee report on our fiscal 1982 authorization that we all agree on a reasonable level of funding for the groundwater program.

Second, I am happy to report that the groundwater research plan, which is of major interest to you, is in its final stages of completion and will soon be forwarded to you.

The plan identifies research done to date by EPA and others, as well as remaining needs for technical information.

The plan also identifies specific goals and research agendas in six areas: methods development, specific sources of contamination, aquifer rehabilitation and information transfer.

We look forward to your review of the plan.

Research on aquatic weeds is another area in which the committee has expressed interest. Over the past 3 years, ORD has funded 15 research projects and other studies of this topic, largely in response to this committee's expressions of concern, at a total cost of $1.7 million.

The majority of these projects is still under way.

We are presently trying to evaluate further research needs in this area and are seeking to elicit additional research proposals of acceptable scientific quality and potential utility from the academic community.

We shall, of course, keep you advised of our progress.

The committee's concerns about disposal of sewage sludge were also expressed in your correspondence and the fiscal 1982 authorization report.

We have been reviewing the Agency's position in this area, and frankly we find that it has not been coherent.

We are presently working to coordinate the various regulatory activities that pertain to sludge disposal, and we will be happy to inform you of any significant changes we envision.

Our research efforts, of course, will need to parallel our regulatory approach, and we will subsequently be glad to furnish you with details of those as well.

Your correspondence also raised a question about our activities on indoor air pollution.

In fiscal 1981, ORD provided contractor support for the Interagency Research Group on Indoor Air Quality, which recently identified 171 relevant research projects underway, supported mostly by Federal agencies.

In specific projects, ORD also evaluated asbestos removal methods, evaluated the effectiveness and costs of activated carbon air filters and hydrocarbon and carbon monoxide removal in residences, and studied sources and levels of indoor NO_2, CO, and formaldehyde.

In fiscal 1982, we plan to continue providing contractor support for the Interagency Research Group on Indoor Air Quality and investigate radon removal devices such as air-to-air heat exchangers, recirculating filters, and electrostatic precipitators, as well as other radon control methods such as sealants, subfloor ventilation, preconstruction site selection and treatment of drinking water supplies.

In the context of EPA's overall budget reductions, research on specific indoor air pollution topics decreases from $600,000 in fiscal year 1981 to $500,000 in fiscal year 1982.

[Question and response follow:]

Question. List and indicate the cost of the specific indoor air pollution research projects that the Agency has or will fund in fiscal year 1981 and fiscal year 1982. What is the Agency's policy on the direction and funding of research on indoor air pollution?

Response:

[Dollars in thousands]

Project title	Fiscal year—	
	1981 [1]	1982 [1]
Evaluation of methods for measuring indoor radon and decay products (Butte study)	1,200	180
Effect of indoor air circulation systems on radon decay product concentration	25	10
Dynamics of airborne radon decay products	10	.....
Radon emanation from and diffusion through floors, walls, cement slabs, and transport through small holes and cracks in buildings	10	.....
Health effects of radon in water	10	10
Characterization and control of indoor air pollutants	[2] 200	.....
Characterization of indoor air pollutants	.....	500

[1] Includes extramural funds and personnel compensation costs.

[2] This amount is approximately $400K less than originally planned. These resources were proposed for a 1981 rescission, which was not granted. For the rescission amounts returned, OMB and the Agency are working out the return for various programs; therefore, some of these monies may be recaptured.

Since EPA has no mandate to regulate indoor air quality, research directed specifically at controlling indoor air quality is not planned. However, EPA recognizes that people spend most of their time indoors, and that indoor exposures to many pollutants can be important. Therefore, in fiscal year 1982, EPA-ORD will carry out studies characterizing indoor air exposures of people to selected pollutants of importance.

EPA-ORD is also supporting several studies of 24-hour human exposure to volatile organic compounds and to carbon monoxide. These studies will add considerably to our knowledge of typical levels of exposure indoors.

Yet, we are devoting several times that level of effort in developing new methods for measuring and evaluating total human exposure to toxic pollutants, including indoor exposures.

These activities are generally increasing in our program.

For example, we are more than doubling our effort, from $500,000 in fiscal year 1981 to $1.1 million in fiscal year 1982, to assess carbon monoxide exposure through personal monitors and carboxyhemoglobin blood levels, and to model the daily activities of urban populations, indoors and outdoors, to evaluate overall exposure.

We are also increasing our efforts to develop and evaluate personal dosimeters and other exposure evaluation methods in our toxics research program.

These activities are increasing from $2 million in fiscal year 1981 to $2.2 million in fiscal year 1982.

There were some additional questions in your correspondence regarding our former proposal to rescind funds from the fiscal year 1981 research budget, changes in the Science Advisory Board, and our internal peer review process.

In the first case, our rescission proposal was developed in response to this administration's efforts to pare down the budget and begin spending deferrals as quickly as possible.

Dr. Jovanovich will rigorously review the intended use of the 1981 funds prior to their being simply restored to their original allocations.

[Question and response follow:]

Question. Identify, by media total and as a percentage of 1981 appropriations, the original allocations of 1981 R. & D. funds which have been carried-over into 1982 as a result of the 1981 Rescission proposal.

Response:

	1981 R.&D. Appropriation	Unobligated rescission	Percentage 2:1
Air	40,373.5	4,663.3	11.6
Water quality	37,870.3	11,008.5	29.1
Drinking water	18,390.7	4,392.8	23.9
Solid waste	20,362.2	1,134.9	5.6
Pesticides	4,400.2	212.3	4.8
Radiation	1,353.3	380.1	28.1
Interdisciplinary	12,123.2	68.6	.6
Toxic substances	23,615.6	4,826.1	20.4
Energy	95,031.4	15,528.9	16.3
Program management			
R. & D. total	253,520.4	42,215.5	16.7

Next, it is true that we are in the process of reviewing the roster of technical experts on whom we rely for specific advice, and that we are also reviewing the internal peer review system.

Both are topics in which Dr. Hernandez and Dr. Jovanovich are most interested.

[Question and response follow:]

Question. How does the Agency intend to use the EPA Science Advisory Board? Will the SAB be involved in the regulatory decisionmaking process and, if so, how? How will the structure and membership of the SAB change under this Administration? Who will select new members of SAB and what criteria will be used in this selection process?

Response. Operating under the provisiqons of the Environmental Research, Development, and Demonstration Authorization Act of 1978, the Science Advisory Board has a broad responsibility to review the scientific and technical bases of Agency decisionmaking. This includes the review of Agency research as well as the review of the utilization of scientific information in the Agency rulemaking process. On October 28-29, 1981, Dr. Hernandez discussed with the SAB Executive Committee proposals to enhance the Board's role. These proposals were contained in a draft memorandum entitled "Improving the Scientific Adequacy of Agency Regulations and Standards." The SAB Executive Committee concluded that the proposals constituted a "workable framework" for SAB reviews.

The Executive Committee of the SAB recently reorganized the standing committees of the Board. The new structure includes committees for Environmental Health; Environmental Effects, Transport, and Fate; and Environmental Engineering. The Clean Air Scientific Advisory Committee will continue as a standing committee of the Board.

The Administrator will continue to appoint members of the SAB. Criteria for the selection of members to the SAB include: (1) individuals qualified by education, training, and experience to evaluate scientific and technical information on matters referred to the Board; (2) representation of a diverse set of scientific and engineering disciplines to ensure comprehensive technical reviews; and (3) representation of the various schools of scientific and engineering thought that appropriately reflect the complexity of the technical issues submitted to the SAB for review.

Nominations for membership on various committees are submitted by existing committee members and the Chairman, by the staff, and by nominations from the public, as received from various technical and scientific societies and other public interest groups. These nominations will then be sent to the Executive Committee of the Science Advisory Board for consideration and for recommendations to the Administrator for appointment.

Their goals, as I indicated earlier, are quite clearly to strengthen the technical basis for our decisionmaking process.

Mr. Chairman and members of the subcommittee, I hope I have provided you with sufficient information in your major areas of concern to initiate a new era of constructive dialog between us.

We have an important job ahead in reconfiguring the agency's research management, and I welcome your continued interest.

We intend to make changes, but only after proper and responsible thought, analysis and consultation, including consultation with this subcommittee.

Our goal is to improve the management and performance of ORD so that, even with reduced resources, it will produce significantly better research and contribute more effectively to EPA's decisionmaking.

We believe this is an achievable goal, and I am hoping for your hearty support in these efforts.

Mr. SCHEUER. Without objection, Dr. Hernandez's prepared remarks will appear in the record at this point.

[The prepared statements of Mrs. Gorsuch and Dr. Hernandez follow:]

94-034 O - 82 - 3

STATEMENT OF
ANNE M. GORSUCH
ADMINISTRATOR
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
SUBCOMMITTEE ON
NATURAL RESOURCES, AGRICULTURE RESEARCH AND ENVIRONMENT
COMMITTEE ON SCIENCE AND TECHNOLOGY
UNITED STATES HOUSE OF REPRESENTATIVES
OCTOBER 22, 1981

Good morning, Mr. Chairman and members of the Subcommittee.

I am pleased to meet with you today to discuss EPA's research and development program. I would like to express personal regret that conflicting demands on my schedule prevented me from accepting your invitation at an earlier date. I appreciate the Subcommittee's effort and continuing interest in EPA's research and development program, and I hope that we may further improve communication on the scientific and technical issues at hand.

Importance of Good Science

I would like to begin by stating my strong belief that the improvement of our scientific and technical knowledge about environmental concerns is vital. EPA must do this not only at the national level, but also at a State and local level.

As you know, the President has clearly demonstrated the importance he places on EPA's scientific performance by appointing Dr. John Hernandez as Deputy Administrator, the first time in the Agency's history that a scientist has been named to its top management. Dr. Hernandez' personal goal of improving the science in EPA is well known.

Elected and appointed public officials are called upon almost daily to make difficult decisions on major environmental policy issues involving a great deal of scientific controversy and uncertainty. The more uncertainty there is, the more difficult it is to estimate the proper balance between public safety on the one hand, and the often enormous costs of pollution control on the other. We simply can not afford to err badly in either direction. Better knowledge of the scientific and technical facts almost always reduces the likelihood of such error.

I consider EPA's research and development program to be critically important to the goal of more informed decisionmaking. Research is expensive, but ignorance can be much more expensive. Because the resources of the Federal government are limited, we need to use them wisely. In the case of EPA's research program, this means we must ensure several things: first-rate scientists and engineers, suitable facilities and equipment, intelligent planning, efficient management, and uncompromising professional objectivity and scientific quality assurance.

Problems Facing ORD

Soon after the Senate confirmed our appointments, John Hernandez and I initiated a detailed evaluation of the Agency's research and development program. I would like to offer some of our preliminary findings. Accompanying me today is Dr. Andrew Jovanovich, Acting

Assistant Administrator for Research and Development, who has been leading our efforts to evaluate the program.

First, the good news. From his initial site visits to our laboratories around the country, Dr. Jovanovich has brought encouraging reports of considerable scientific and technical staff talent, good indications of professional dedication, and many excellent research facilities and equipment. Clearly, we seem to have the basic materials for a fine program.

The rest of the picture is not as bright, however. A recent management task force study done at my request estimated that up to 26 percent of EPA's total personnel are devoted to administrative matters, rather than to substantive Agency missions. Although it is difficult to break down such estimates accurately, the situation may be even worse in the Office of Research and Development, since that office is top-heavy with administrators. An astonishing 31 percent of the 230 permanent full-time employees in ORD Headquarters are managers at the Senior Executive Service or GS-15 level, as compared with only seven percent of the 1440 people in our laboratories. Although 86 percent of ORD's permanent full-time personnel are in the labs, the majority of its SES-level executives are in headquarters. We find that ORD has created complex layers of headquarters managers whose interactions often result in a higher priority on paperwork than on research.

We are by no means the first to find serious problems in ORD's management and overall performance, of course. The House Committee on Science and Technology, and this Subcommittee in particular, have maintained a strong interest in EPA's research program in the past and have devoted much effort to solving its management problems. The problems you and others have identified include a lack of responsiveness to the Agency's real research needs, ineffective and unreasonably complex planning processes, excessively cumbersome and top-heavy management, a failure to properly balance long-term research against shorter-term problem-solving scientific and technical activities, and a lack of consistent scientific quality. In the past several years, these problems have been identified over and over again, not only by this Subcommittee, but also by other Congressional Committees, the General Accounting Office, the Office of Technology Assessment, the National Research Council, and various EPA intra-agency studies.

The earliest significant evaluations of ORD's performance were made by the House Committee on Science and Technology and the Senate Committee on Public Works. By 1974, these Committees had reported serious deficiencies and a low morale among ORD's key laboratory scientists. In response, an EPA intra-agency task force developed a number of recommendations which were implemented to change the Agency's research planning process and the organization of ORD.

Despite this hopeful step, serious problems again emerged. Between 1975 and 1977, ORD's programs were again evaluated by the Committee on Science and Technology, as well as by the Office of Technology Assessment and the National Research Council. These studies concluded that ORD's overall performance was not satisfactory and cited inadequate coordination with the Agency's regulatory program offices, insufficient attention to long-term anticipatory research, and inadequate peer review to ensure scientific quality. In response to these concerns (and a requirement in its 1978 authorization act), ORD prepared the well-known "Culver Report," that led to the establishment of today's research committee system.

The problems have persisted. During the past year, the General Accounting Office has released two reports acknowledging progress in establishing better dialog between ORD and the rest of the Agency, but again pointing out inadequate planning, lack of relevance, inconsistent scientific quality, and an inability to define the Agency's long-range goals or needs.

Our own evaluations, underway since June, agree with yours and the others. Although a number of changes have been made in the Agency's research program in recent years, most of the same deficiencies are still with us, in many ways unchanged.

In spite of the steps that have been taken by the Office of Research and Development to address them, ORD has yet to become the responsive, respected professional research organization that we all want to see. Low morale among key scientific staff in our laboratories still exists today, probably little changed since 1974. The research committee system implemented in 1979 has mainly been responsible for improving the dialog between EPA's regulatory, operational, and scientific groups to focus our research activities. But as I mentioned, the most recent GAO report on ORD, issued this July, concluded that problems remain.

Consider, for example, an EPA regulatory program official who needs scientific information from the Office of Research and Development. He asks the appropriate research committee, which turns that need into a research proposal. The committee then ranks the proposal against all others in its area. If the proposal survives, it is forwarded as a recommendation to the Assistant Administrator for Research and Development.

Then, the confusion really begins. The proposal, which typically is only one of the dozens coming from each of the fourteen presently existing research committees, gets referred to ORD's Headquarters Office Directors, and then to their subordinate Division Directors and staff. They in turn respond,

often rewriting the proposal while injecting their own views, interests, and understandings. Often, the proposal is also sent to one or more of ORD's laboratories for rewriting, thus adding supplemental views, interests, and levels of understanding.

If the proposal survives in any recognizable form, the Assistant Administrator and his large budget staff (who add their own touches) rank its priority in a draft decision unit. This ranking passes through the Agency's Office of Policy and Resource Management, which refers it to me for a final determination at the Agency level.

All through this labyrinth, the proposal is modified, reviewed and re-modified by the various participants in the process. A research proposal may be re-conceptualized and rewritten a dozen times or more, if it survives. The laboratory selected to implement the proposal must continuously monitor the changes at each step, since Federal procurement practices for personnel, contracts, equipment, and facilities require long lead times that a laboratory must try to anticipate. The official who originally requested the research must wait an average of 18 months from the time of the request until the laboratory can <u>begin</u> work on it; this assumes that the requestor is still interested, that delay and regulatory changes haven't rendered the need obsolete, and that the proposal is still

recognizable. On top of this, one must add up to a year for detailed planning and procurement lead time. Subsequently doing the actual work requires its own time before the regulatory program's needs can be met, of course, but this often takes less time than the approval process.

It is not hard to see why external evaluators have criticized ORD's responsiveness to the research needs of the Agency, or why many regulatory program officials have all but given up trying to obtain useful responses from ORD. Moreover, lobbying is often found to be a more effective tactic than either legitimate needs or sound research. If ORD makes a decision adverse to a favorite research project, numerous ways have historically been found to circumvent the system and overturn the decision, regardless of overall Agency or national priorities. Although many people in ORD do their job well, the present system seems to encourage building or protecting existing organizations and activities without regard to real research needs.

All of this is tragic. As I mentioned earlier, EPA has more than its share of capable, dedicated scientists who are struggling to provide the high quality research and technical information needed by the Agency. But they are burdened by an astoundingly complex and cumbersome management system and a budget planning process that seem more to frustrate than support their efforts.

As the administrative practices in ORD headquarters have grown, so have the complexity and overall effort devoted to the budget and planning process. Today, there are approximately 916 managerial, administrative, and clerical employees in ORD, representing about 40 percent of the organization's total personnel. Their administrative work in turn requires more paperwork from ORD's scientific and technical personnel, usually at the expense of research. In fact, one of our laboratory directors recently stated that he must spend about 70 percent of his time (not to mention travel costs) on administrative matters instead of managing research, largely in dealing with several bosses in headquarters, plus eight different research committees with sixteen co-chairmen, plus all the other aspects of the present budget and planning maze.

Blueprint for Improvement

We owe it to the American public, to the fine scientists in ORD, and to the rest of the Agency to correct these problems. Nobody can direct scientists to produce creative ideas or quality science, but we certainly can reorient the management system that can stifle their potential for excellent contributions. After more than a decade, EPA's research and development program by now should be a responsive, respected professional research organization able to provide the high quality scientific and technical information needed by the Agency and by State and local governments.

We are well aware that each previous administration has tried to solve the persistent problems of ORD, and failed. We have a chance to succeed, if we approach the job with uncompromising candor and a strict intolerance of self-interest in the status quo. We are trying to learn from the earlier failures and from the knowledge of senior career staff in the Agency.

To begin improving ORD, we recently convened a special advisory group to design and carry out innovative measures for correcting the Agency's research planning and management problems. We appointed a mix of senior scientists and career managers to this group, chosen from both the laboratories and Headquarters. Interestingly, the group has already reached an early consensus on major problems in ORD. Such accord within the Agency's senior career staff will go a long way toward changing what we need to change and preserving what works well. In addition to the problems already identified by external evaluators, the advisory group has concluded that widespread, unconstructive competition for resources exists within ORD, and that there are unproductive, paper-intensive management practices nurtured by an excessively large staff in Washington, a lack of strategic planning, and an atmosphere of continual crisis management.

We have identified several goals for change. The first and most important goal is scientific quality. The soundness

of what we do in EPA is based on the scientific information available to us. In order to improve quality, we intend to reorient and strengthen the peer review process. But such changes will not necessarily promote or stimulate creativity. For this reason, we will also be evaluating ORD's present incentive systems. We need to provide a climate in which our best scientists can achieve substantial recognition and reward when they excel and solve problems, not just when their programs grow in size.

Along with scientific quality we must insist upon relevance in research. This topic must assume increasing importance in the coming years as we deploy the Agency's resources to yield the maximum health, environmental, and economic benefits. I expect rigorous evaluations of ORD's relevance to the Agency's regulatory programs. This does not mean that we will devote all of our energies to short-term, highly applied or routine projects. We recognize the need for long-term research, not only to advance the state of science and our knowledge, but also to provide the base of expertise for our shorter-term scientific needs. We want to strengthen the ways in which we ensure the relevance of the long-term research as well as the rest of the program.

As I mentioned earlier, we are also interested in moving ORD toward a faster response time, with a greater portion of resources devoted to real research, and less to paper pushing and administrative trivia. More effective, less

cumbersome research planning and management will not only free our scientists from wasteful procedural burdens, but also help to maintain continuity in EPA's research programs. Well-planned change is necessary in any research program, but continual chaotic change resulting from poor planning can paralyze research capability, since each laboratory requires significant lead time to acquire the scientific skill mix, equipment, and experience needed to do its job well.

To improve our planning, we are relying heavily on the special advisory group. They have been asked to prepare options for reconfiguring ORD and reorienting certain communications and reporting channels, including those between the laboratories and ORD Headquarters, and among the laboratories, research committees and regulatory offices. In general, we anticipate that reductions in the number of management layers and administrative staff are necessary to preserve ORD's scientific staff. We also perceive a need to simplify the planning system, increase the authority and accountability of laboratory directors, consolidate and upgrade laboratory program reviews, improve the relevance of research grants to EPA's needs, improve ORD's information management systems, and provide a framework of strategic planning guidance at the beginning of each annual planning cycle.

I shall await the advisory group's findings before making any specific determinations. I have confidence

in their ability to find sensible answers to the problems identified and expect a report from the group by the end of the year. I might also add that at the same time, the Inspector General's Office is undertaking a major audit of ORD's extramural research efforts. This audit, which should take about eight months, should provide useful information for evaluating our extramural programs. The audit findings will be considered by the special advisory group, as well as by other senior people in the Agency.

Response to Congressional Concerns

Mr. Chairman, the Science and Technology Committee, and your Subcommittee in particular, has expressed continuing interests in a number of activities in EPA's research and development program. I would like to turn now to those interests and respond to some of the more specific questions and concerns raised in your recent letters to me, regarding certain research efforts and past decisions on the ORD program. I would like first to discuss your concerns about reductions in the research grants, water quality, energy, health, and engineering programs. As you know, the Administration has announced a 12 percent reduction in Fiscal 1982 programs, with further possible reductions predicted for Fiscal 1983. Since EPA is not exempt from these goals, we have critically examined our situation on an Agency-wide basis. Because our research programs must be in harmony with the Agency's overall efforts, our research priorities must parallel those of the rest of the Agency.

For example, in Fiscal 1982, we show a reduction in water quality research from the Fiscal 1981 level. This involves a shift away from research on conventional water pollutants to expand in areas of increasing interest such as groundwater research. This is also true in the energy and engineering programs. In these areas, thorough evaluation of the programs revealed that some research activities were not well coordinated with our research in other areas and were not producing benefits commensurate with their cost. For example, projects on drinking water and toxic substances were simultaneously being funded in both the energy program and the base research program. Analysis revealed that the additional energy program expenditures for some of these projects were not justified by the research contributions they provided to meet overall Agency needs.

The reductions in our health research program were similarly analyzed to insure minimum program disruption in those areas where we have solid research capability. The decision to target a significant portion of the health research reductions in the chronic epidemiology program resulted from several technical and managerial considerations and discussions with epidemiologists. First, the use of epidemiological studies for regulatory purposes is both complex and expensive. Scientific talent in this area is relatively scarce and difficult

to obtain. Building EPA's in-house epidemiology program to an adequate level of performance would have required a substantial increase in personnel and funds. Other agencies, such as the National Institutes of Health, are better equipped than EPA to conduct such studies, and EPA also has the option of obtaining additional assistance from well-qualified institutions through extramural mechanisms such as our Epidemiology Center of Excellence at the University of Pittsburgh. The decision to reduce our in-house epidemiology program was actually based on analyses conducted prior to any involvement by the present administration, and our more recent evaluation confirmed that decision.

Regarding extramural programs, I would like to allay your concerns about EPA's research grants program. Congress called for research funds to be devoted to long-term research, and we plan to meet that intent. I have expressed my concerns, along with many of EPA's laboratory scientists, that the management and directions of that program have been too isolated from the rest of the Agency. In fact, we hope to improve our program by increasing the relevance of funded long-term research to the Agency's mission needs.

In response to your continuing concern about acid rain, groundwater contamination, and aquatic weeds, I would like to offer the following. First, ORD developed a program on acid deposition several years ago, and the program is now readily

identifiable in the budget submission to the Congress. The known and potential effects of acid deposition continue to be of concern to us, although the magnitude and complexity of acid deposition render quick or simple solutions unlikely. Further refinements in our current information are necessary before we can predict the extent to which emission controls on various sources will or will not reduce acid deposition in sensitive areas. We expect our research program to help achieve such a capability.

Concerning our groundwater research, I am pleased on two accounts. First, I note from the Committee report on our Fiscal 1982 authorization that we all agree on a reasonable level of funding for the groundwater program. Secondly, I am happy to report that the groundwater research plan, which is of major interest to you, is in its final stages of completion and will soon be forwarded to you. The plan identifies research done to date by EPA and others, as well as remaining needs for technical information. The plan also identifies specific goals and research agendas in six areas: methods development; contaminant transport and fate; subsurface characterization; specific sources of contamination; aquifer rehabilitation; and information transfer. We look forward to your review of the plan.

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Research on aquatic weeds is another area in which the Committee has expressed interest. Over the past three years, ORD has funded 15 research projects and other studies of this topic, largely in response to this Committee's expressions of concern, at a total cost of $1.7 million. The majority of these projects is still underway. We are presently trying to evaluate further research needs in this area and are seeking to elicit additional research proposals of acceptable scientific quality and potential utility from the academic community. We shall of course keep you advised of our progress.

The Committee's concerns about disposal of sewage sludge were also expressed in your correspondence and the Fiscal 1982 authorization report. We have been reviewing the Agency's position in this area, and frankly, we find that it has not been coherent. We are presently working to coordinate the various regulatory activities that pertain to sludge disposal, and we will be happy to inform you of any significant changes we envision. Our research efforts, of course, will need to parallel our regulatory approach, and we will subsequently be glad to furnish you with details on those as well.

Your correspondence also raised a question about our activities on indoor air pollution. In Fiscal 1981, ORD provided contractor support for the Interagency Research Group on Indoor Air Quality, which recently identified 171 relevant research projects underway, supported mostly by Federal agencies.

In specific projects, ORD also evaluated asbestos removal methods, evaluated the effectiveness and costs of activated carbon air filters and hydrocarbon and carbon monoxide removal in residences, and studied sources and levels of indoor NO_2, CO, and formaldehyde. In Fiscal 1982, we plan to continue providing contractor support for the Interagency Research Group on Indoor Air Quality and investigate radon removal devices such as air-to-air heat exchangers, recirculating filters, and electrostatic precipitators, as well as other radon control methods such as sealants, subfloor ventilation, preconstruction site selection and treatment of drinking water supplies. In the context of EPA's overall budget reductions, research on specific indoor air pollution topics decreases from $600,000 in FY 81 to $500,000 in FY 82. Yet, we are devoting several times that level of effort in developing new methods for measuring and evaluating total human exposure to toxic pollutants, including indoor exposures. These activities are generally increasing in our program. For example, we are more than doubling our effort, from $500,000 in FY 81 to $1.1 million in FY 82, to assess carbon monoxide exposure through personal monitors and carboxyhemoglobin blood levels, and to model the daily activities of urban populations, indoors and outdoors, to evaluate overall exposure. We are also increasing our efforts to develop and evaluate personal dosimeters and other exposure evaluation methods in our toxics research program. These activities are increasing from $2.0 million in FY 81 to $2.2 million in FY 82.

There were some additional questions in your correspondence regarding our former proposal to rescind funds from the Fiscal 1981 research budget, changes in the Science Advisory Board, and our internal peer review process. In the first case, our recision proposal was developed in response to this Administration's efforts to pare down the budget and begin spending deferrals as quickly as possible. Dr. Jovanovich will rigorously review the intended use of the 1981 funds prior to their being simply restored to their original allocations. Next, it is true that we are in the process of reviewing the roster of technical experts on whom we rely for specific advice, and that we are also reviewing the internal peer review system. Both are topics in which Dr. Hernandez and Dr. Jovanovich are most interested. Their goals, as I indicated earlier, are quite clearly to strengthen the technical basis for our decision-making process.

Conclusion

Mr. Chairman and members of the Subcommittee, I hope I have provided you with sufficient information in your major areas of concern to initiate a new era of constructive dialog between us. We have an important job ahead in reconfiguring the Agency's research management, and I welcome your continued interest. We intend to make changes, but only after proper and responsible thought, analysis, and consultation, including consultation with this subcommittee. Our goal is to improve the management and performance of ORD so that, even with reduced resources, it will produce significantly better research and contribute more effectively to EPA's decisionmaking. We believe this is an achievable goal, and I am hoping for your hearty support in these efforts.

TESTIMONY OF
DR. JOHN W. HERNANDEZ, JR.
DEPUTY ADMINISTRATOR
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
SUBCOMMITTEE ON
NATURAL RESOURCES, AGRICULTURE RESEARCH & ENVIRONMENT
COMMITTEE ON SCIENCE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES

OCTOBER 22, 1981

Mr. Chairman and Members of the Subcommittee, I am John W. Hernandez, Jr., Deputy Administrator of the Environmental Protection Agency. It is pleasure to be here today. In your follow-up letter of invitation, Mr. Chairman, you made reference to the Agency's handling of formaldehyde. If I may, I would like to briefly address that issue this morning.

As you know I have held a number of meetings in my office with industrial, EPA and other scientists on the nature of the toxicity of and exposure to this chemical. Some concerns have been raised as to the nature of these meetings. I believe that the best means of addressing those concerns and assuring you, Mr. Chairman, of the propriety and scientific value of these sessions is to review the Agency's interest in and action on formaldehyde.

EPA's interest in the subject was triggered by the October 1979 preliminary report of the Chemical Industry Institute of Toxicology (CIIT) which suggested that interim results of formaldehyde inhalation tests involving rats indicated that the substance may induce cancer in these animals at high concentrations of exposure. Over the next year, EPA and other federal agencies began to look into the matter of formaldehyde.

Despite the concerns raised by the CIIT study, numerous questions remained, and consequently, there was no rush toward regulation. Indeed, fifteen months elasped from the time the issue was first brought to the attention of former EPA Administrator Costle to the time when the Carter Administration left office. During that entire time, the Agency took no efforts to regulate formaldehyde, nor did it deem the chemical as one to be given priority consideration for regulatory action under the Toxic Substances Control Act.

It was not until May 20, 1981, the very day Administrator Gorsuch and I took office, that EPA staff recommended that action be taken on formaldehyde under TSCA. In a May 20th memo, the Acting Assistant Administrator for our Office of Pesticides and Toxic Substances urged that the Administrator designate formaldehyde a priority substance under Section 4(f) of TSCA. The memorandum only called for priority consideration; it did not reach any ultimate conclusion on the safety of formaldehyde nor did it recommend any actual regulatory action. To have made a snap decision on this critical issue during our very first days in office would, I believe have been the height of irresponsibility.

During this initial period, I received letters and technical reports from the Formaldehyde Institute. I sent them a copy of the EPA staff package on formaldehyde at their request. On May 27th, again at their request, I met with seven of their representatives in my office. Their scientists told me of a number of technical weaknesses in the staff document.

I then initiated a review of all the data available on formaldehyde with the intent of providing the Administrator with a recommendation on the scientific and technical issues, so that she could make a policy decision as soon as was practicable. Preliminary investigation led me to report on June 9th of this year that the ambiguities and weakness of the information available to me made it impossible to render an affirmative or negative finding as to whether or not exposure to formaldehyde may or will present a significant risk of serious or widespread harm to humans. I recommended that EPA staff be instructed to conduct additional studies, and, at the same time, I resolved to continue to make all possible efforts to learn everything I could about the scientific issues involved.

Part of my review of the subject involved my attending a series of meetings on formaldehyde. These meetings took place at EPA and involved scientists from industry as well as from the Agency; scientists not from EPA or industry also participated. While a small handful of the attendees were not scientists - Agency and industry lawyers come to mind - the discussion dealt exclusively with scientific matters.

The meetings grew out of requests, made orally and in writing, by representatives of the Formaldehyde Institute asking for an opportunity to meet with me to discuss the scientific issues pertaining to formaldehyde.

The purpose of those wanting to see me was to present scientific evidence which would, they claimed, make it clear that formaldehyde does not involve the dangers envisioned by Section 4(f) of TSCA.

Since I had been charged by the Administrator with reviewing all the credible scientific information concerning possible "4(f) toxicity" of this chemical, I was, of course, interested in hearing what evidence these industry scientists had to offer in the presence of EPA staff scientists from whom I also wanted to hear. The free give-and-take on scientific issues, I felt, would be of the greatest benefit to all concerned in determining the technical facts. It would also tend to keep all the participants intellectually honest. I, therefore, explained to the Formaldehyde Institute that while I would be glad to listen to their scientists, it would not be one-on-one; it would be in the presence of other scientists knowledgeable on the issues.

It was left to the Formaldehyde Institute to decide whom they wanted to bring. I asked the Acting Assistant Administrator for Pesticides and Toxic Substances to decide which Agency personnel - as well as outside scientists - should be invited. The only injunction I laid down to those doing the inviting was that participants in the discussion were to be those who could shed some light on the scientific issues. The meetings were to be exclusively scientific in nature. I made it clear that "policy recommendations" or "legal interpretation" were not part of the agenda for discussion. Those were matters for the Administrator.

At the outset of the first meeting, I also made it clear that I did not view the gathering as a "science court". There was not going to be any cross-examination or other "procedural rules". While participants could take whatever notes they wanted, neither I nor my staff would be keeping official "minutes". What I wanted, I told those in attendance was an honest, free-wheeling exchange of scientific information. I also told them that while I did not know how long it would take to thoroughly air the relevant scientific issues, I wanted to get all the facts - whether that meant one meeting, two meetings or several meetings. It turned out that three meetings were necessary to cover the topics I wanted discussed.

The first of these "formaldehyde sessions" took place on June 19, 1981 at EPA headquarters, and lasted about 2 hours. The subjects discussed that day were available animal data, the mechanism of formaldehyde carcinogenicity, and human epidemiology available on formaldehyde. In addition to EPA and Formaldehyde Institute participants, the meeting also included scientists from the Oak Ridge National Laboratory, the National Academy of Sciences and the Chemical Industry Institute of Toxicology.

The second formaldehyde session took place on July 28, 1981, on which occasion the topics discussed were human epidemiology and human exposure. Like all the meetings on formaldehyde, it was held at EPA headquarters, and lasted 2 to 3 hours. The third meeting on formaldehyde occurred on August 14, 1981, at which time

discussion focussed on the principles of risk assessment which EPA used to determine formaldehyde's carcinogenicity and ongoing epidemiological studies. Each of the meetings were attended by scientific experts from EPA, the Formaldehyde Institute, and various research facilities. The EPA participants, the Formaldehyde Institute participants and the "outside" participants varied from meeting to meeting.

While some participants attended each of the three meetings, others participated only in the meeting or meetings that pertained to their area of scientific expertise. Attendance was at the discretion of the individual participants. If they wanted to attend all the sessions, that was fine; if they wanted to attend only a meeting in their area of specialty, that was all right also. The only rule was that discussion be knowledgeable and focus on the scientific issue or issues at hand.

On the subject of attendance, a member of my staff asked me how I would respond if people not specifically invited should seek to attend any of the sessions. His question was motivated by the fact that word travels fast in this town, and as word of the meetings spread, he felt it was inevitable that others would ask to attend. The "rule" I gave him was the same one I gave to the participants at the meetings: I wanted to hear from anyone who could give me credible scientific information on the subject at issue. The whole idea of these meetings was to educate us on the science, and anyone who could contribute to that process -

regardless of their ultimate feelings on whether formaldehyde should or should not be regulated - was welcome. Unwelcome would would be those who wanted to urge policy as opposed to providing scientific information, those who wanted to merely observe, and those who wanted information themselves - who wanted to ask me questions. The purpose of the meetings was to get all the scientific information pertaining to the exposure and toxicity of these substances out in the open.

Now that they are over, I feel that these meetings have been very useful. Mutual scientific understanding of the mechanism of these two substances has been enhanced. I feel my knowledge on the subject is greater than it would have been if I had met with just Agency scientists or just industry scientists. By getting many knowledgeable people in the same room and by thoroughly scrutinizing the available data, I believe scientific accuracy has had its best chance to emerge.

This concludes my statement. I would be happy to answer any questions you may have.

Mr. SCHEUER. Thank you very much, Madam Administrator.

It seems to me that what you are advocating is the transfer of greater responsibility for environmental protection research to the States, perhaps counties and also industries.

Mrs. GORSUCH. I am sorry to have left you with that impression.

Our major goal in the Agency is to improve both the quality and responsiveness of the research effort of the Department.

Our major goal is obviously internal and that is to improve both the quality and the process by which research and development is done in the Environmental Protection Agency.

We know that the success of our efforts, both in the regulatory arena and in recommending legislative changes for your consideration have to rest on good, sound science.

Mr. SCHEUER. I am talking about what we perceive as being a shift, a desired shift in the locus of responsibility.

We perceive a policy to shift responsibility for environmental R. & D. from the EPA to States and also to private industry.

Is there, indeed, such a policy under which you are operating?

Mrs. GORSUCH. No, Mr. Chairman.

I think that research and development is among the good reasons why we have a Federal Environmental Protection Agency.

I don't believe it would be wise husbanding of resources of the Nation to expect research and development to be done in each of the 50 States to support national environmental goals.

Mr. SCHEUER. Or by industry?

Mrs. GORSUCH. We clearly recognize that——

Mr. SCHEUER. Or by industry?

Mrs. GORSUCH. Mr. Chairman, I would hope industry continues to do the research and development they have traditionally done to promote their industrial goals and I also hope that, unlike past practice, we will take a good look at the science that is developed by industry and use that scientific basis as a tool for our efforts.

Mr. SCHEUER. There is no emerging policy to transfer responsibility for environmental R. & D. away from EPA to industry?

Mrs. GORSUCH. No.

Mr. SCHEUER. I have a memo dated July 17 from Dr. Jovanovich to you, Mrs. Gorsuch, in which he states:

> The focus of the base water quality research program is on facilitating the program's office policy shift of controlling a pollution source on the basis of potential benefits to improving water quality, as opposed to point source control using best available technology. Much of the research will be aimed at giving States the tools to make this shift.

I may be interpreting this wrong and I would be happy to hear from you or Dr. Jovanovich, but it seems to me——

Mrs. GORSUCH. I don't have the memorandum before me so it is a little difficult to comment on it out of context.

Apparently Dr. Hernandez has a recollection of it and will be happy to comment.

Mr. HERNANDEZ. Mr. Chairman, I don't know about particular memorandums but I think I can speak to the issue.

Each State adopts their own water quality standard based upon criteria developed by EPA. This is a very intensive sort of process and I think what the memo said as you read it, it said that our

research work is aimed at giving them the tools for them to adopt their water quality standards.

That is totally appropriate and has been done in the past and the thing we ought to do.

I find no inconsistency at all.

Mr. SCHEUER. When you say you want to give them tools, that in effect subsumes a decision to pass responsibility to the States and what you want to do is to give them tools to meet that responsibility.

But it certainly subsumes an intent to pass that responsibility to the States, does it not?

Mr. HERNANDEZ. Mr. Chairman, under the Federal Water Quality Act in 1972, they have always had that responsibility. In fact, that goes back to the 1965 act.

States have always adopted their own water quality standards, based on our criteria and their use of the particular reach of the streams.

Our research is aimed at providing them with the information on how to translate our criteria into stream standards at their specific points of view on what is growing there and living there.

I think it is an appropriate thing.

[Question and response follow:]

Question. Under the provisions in the Clean Water Act, the Agency is mandated to promulgate effluent guidelines for toxic pollutants for industry and municipalities. How many effluent guidelines has the Agency promulgated to date and how many remain to be completed? How much funding has the Agency devoted for R&D in support of effluent guideline development in 1980 and fiscal year 1981 and how much will the Agency spend for this work in fiscal year 1982? Does the Agency have the statutory authority to shift its regulatory approach to water pollution from point source control using "Best Available Control" (BAT) to controlling of pollution source on the basis of potential source on the basis of potential benefits to improving water quality?

Response. The Effluent Guidelines Division of our Water Office provided the following breakdown regarding the present status of effluent guidelines:

(1) Industries for which effluent guidelines are planned: aluminum forming, battery manufacturing, coal mining, coil coating, copper forming, electric and electric components, foundries, inorganic chemicals (phase 1), iron and steel, leather tanning and finishing, metal finishing,[1] nonferrous metals (phase 1), ore mining, organic chemicals, plastics, paint and ink and synthetic materials,[1] pesticides, petroleum refining, pharmaceuticals, porcelain enameling, pulp & paper, steam electric, and textiles mills—total 25.

(2) Industries to be excluded under paragraph 8 of the decree: soaps and detergents, gum and wood chemicals, printing and publishing, rubber manufacturing, auto and other laundries, and explosives—total 6.

(3) Industries already excluded under paragraph 8 of the decree: photograph supplies and paving and roofing industries—total 2.

(4) Promulgated guidelines: Timber, 01/81 [2]—total 1, Total Industries 34.

During fiscal year 1980, $13,870,000 of R&D funds were expended in support of effluent guidelines development. In fiscal year 1981, $8,250,000 from the Industrial Wastewater decision unit plus $2,000,000 of Energy R&D funds were appropriated to support effluent guidelines development. These funds have not been completely ex-

[1] These 3 industrial categories represent 6 industrial categories identified by the Decree. (See Footnote 1 of the last section of the response to this item.)

[2] On January 26, 1981, at 46 FR 8260, the Agency promulgated the final effluent limitations for Best Conventional Technology (BCT) and Best Practicable Technology (BPT) in the timber point source category. On February 12, 1981, the Vice President's Task Force on Regulatory Relief at 46 FR 11972 deferred the effective date of the guideline from March 11, 1981, to March 30, 1981. On March 25, 1981, the Vice President's Task Force postponed indefinitely the BCT portion of the Timber Effluent Guideline pending EPA's review of the economic methodology for determining the reasonableness of the BCT limitation. The BPT portions of the Timber Effluent Guideline promulgated in January went into effect on March 30, 1981.

pended in fiscal year 1981 due to the recission package. For fiscal year 1982, $6,220,000 of Industrial Wastewater funds and $1,000,000 of Energy R&D funds have been requested to support this effort.

EPA does not have the legal authority to shift from the best available technology economically achievable (BAT) to control of pollution sources on the basis of improving water quality. A discussion of this point follows:

Technology-based effluent limitations are central to the scheme of the Clean Water Act (the "Act"). Section 301(b)(1)(A) requires that point sources have met, by July 1, 1977, effluent limitations based on application of the best practicable control technology currently available ("BPT"). Section 301(b)(2) requires that point sources meet effluent limitations based on the best available technology economically achievable ("BAT") and, for conventional pollutants, the best conventional pollutant control technology ("BCT"). Depending upon the nature of the pollutants, various deadlines are imposed for compliance with BAT and BCT, the latest being July 1, 1987. Section 304(b) requires EPA to issue regulations defining BPT, BCT, and BAT. In particular, with respect to listed toxic pollutants, the 1977 Amendments to the Act require that EPA promulgate BAT effluent limitations no later than July 1, 1980. Section 307(a).[3]

The Act's emphasis on technology-based limitations, reaffirmed by Congress in 1977, superseded earlier legislation, which adopted a strictly water-quality based approach to pollution control. A basic theme of the Act's legislative history is that the water-quality based approach had failed and that technology-based requirements were necessary.[4]

Mr. SCHEUER. That is in the field of water quality.

Let's turn to energy where we have this national drive to reduce energy dependence on Persian Gulf oil and to produce all kinds of alternative energy in this country, both fossil fuel and nonfossil fuel.

Particularly I am referring to the synfuels program and the coal conversion program, both of which pose major threats to our environment and our health.

What energy-related research do you think EPA should perform, specifically in the field of health effects and control technology development?

Mrs. GORSUCH. Mr. Chairman, as you are undoubtedly aware, the energy research portion of the development program is the largest single investment currently for any effort on research and development.

It exceeds the research and development figures for air or for water, any of the established programs.

There have been to date very large expenditures in this particular area and I am less than pleased to report to you very little has been developed from those large expenditures.

Certainly in our process of reevaluating research and development we will be focusing very carefully on whether the expenditures to date have indeed produced anything of significant value in terms of our mission, which is the protection of the environment, in terms of engineering development.

Likewise, I think that it is also important for us to know that we are largely anticipating—and when it comes to the areas of synfuels—operations that are not yet in existence, and the configura-

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[3] EPA is also required to promulgate BAT regulations for 34 industrial categories by a consent decree entered in *NRDC* v. *Costle*, 8 ERC 2120 (D.D.C. 1976), modified, 12 ERC 1833 (1979). The modified decree contains conditions under which EPA may refrain from issuing regulations. None of these conditions involves water quality.

[4] Extensive recitations on this point from the Conference Report, Senate Report, House Report, and the floor statements of key sponsors in the Senate and House are included in the Administrator's *Louisiana-Pacific* decision, reprinted at 45 Fed. Reg. 61624, September 17, 1980. Accord, *EPA* v. *State Water Resources Control Board*, 426 U.S. 200, 204-5(1976)

tion of which may indeed change as indeed they become more than theory and in fact.

Those things have to direct our thinking on future expenditures in research and development on energy, especially synfuels.

[Question and response follow:]

Question. Energy development activities in the U.S., such as synfuels, coal development, enhanced oil and gas recovery, and refinery and utility conversions, have escalated since the 1973 oil embargo. What are the current and projected environmental problems associated with these activities and their relative magnitude? Will EPA pursue a policy of giving the energy industry "special attention" (i.e., a close watch) as EPA did with the steel industry and smelter industry when they had economic problems and where changing? What energy-related research will EPA undertake, specifically in the areas of health research and control technology development, and why? What are the environmental information needs of the energy industry and how will EPA direct its R&D program in response to those needs?

Response. The Office of Research and Development at EPA has had a large research and development program looking at the energy development activities in the U.S. such as synfuels, coal development, enhanced oil and gas recovery, and refinery and utility conversions since 1974 when the Congress passed a special appropriation for energy research. A significant portion of the research effort has gone into assessing the current and projected environmental problems associated with these activities. EPA has a large number of reports on studies where measurements have been made of current energy development activities or where engineering analysis has been used to estimate possible environmental problems associated with projected energy development activities. The EPA will be working closely with industry to identify the environmental problems that need attention.

The Agency's activities regarding synfuels have already identified a number of air emissions, liquid effluents and solid wastes that may have a potentially deleterious impact. Air emissions include reduced sulfides, ammonia, sulfur dioxide, hydrogen cyanide, polycyclic hydrocarbons and heavy metals. Liquid effluents include ammonia, heavy metals, phenols, aromatic hydrocarbons, thiophenes and aromatic amines. Solid wastes include spent catalyst, gasifier ash and wastewater sludges.

The Agency is doing field studies on the effects on the atmosphere, on surface waters and groundwaters of the developing oil shale industry. Specifically we are examining: problems associated with the disposal of spent shale including wind erosion, runoff and leaching, revegetation and instability after disposal; potential long term effects of wastewaters on regional water supplies; effects of wastewater disposal on surface and ground water; disposal of process gas and water; fugitive dusts from mining, blasting, transportation and disposal of raw shale; and the fate of trace metals in raw shale.

In the area of energy related health research, EPA has concentrated its efforts in developing a methodology and data base to perform health and environmental risk assessments of any energy development activities. Several of the promising synfuel technologies will be used to test the methodology. This methodology will allow EPA policy decisions affecting these industries to be made with a knowledge of the change in risk that would result to both health and to the environment when a particular control technology is applied.

Mr. SCHEUER. We have done a little informal poll of perhaps 20 major actors in this country in the field of synfuels and we have talked to a number of them on the phone as to what kind of R. & D. they would like to see the Government do and what kind of R. & D. they feel they can do themselves.

They are all a little gun shy from the Love Canal situation where Hooker Chemical Co. was sued not only for major threats, but all kinds of secondary, tertiary, comparatively minor threats.

They have told us they are so gun shy they have had a predilection to do R. & D. in terms of health effects on everything, on every conceivable health effect and therefore the control technologies they have developed have been inordinately expensive.

They have told us what they would like to see the Government do is sort of a differentiated study of long-term health threats.

Which are the major ones, which are the medium ones, which are the minor ones and which are the comparatively minimal ones.

So that they can concentrate their control technology R. & D. efforts on the major ball game, on the major threats.

They would save an enormous amount of money, covering 80 or 90 percent of the threats rather than 100 percent.

That last 5 or 10 percent of all the conceivable theoretical threats has a tremendous incremental cost. They say they are not qualified to do these long-term differentiated health effects studies of energy pollution. They feel that is a Government application. They feel that what they want you to do to provide them with the long-term differentiated health effects data so that they will be in a position to provide far more economical and cost effective control technologies.

Does their perception of their need meet your perception of your mission to provide them with what they feel they need?

Mrs. GORSUCH. Well, Mr. Chairman, I am pleased to have that information shared with us. The whole area of synfuels in terms of environmental protection, I think, as I indicated to you, requires our reinvolvement and reexamination.

Volume of expenditures of research money in this area. I frankly did not know until you just shared it with me that that was a priority for industry.

I would like to ask Dr. Jovanovich to respond specifically and I hope that he can in terms of what is being done in energy research and development.

Mr. SCHEUER. Good.

Now, before you respond, Dr. Jovanovich, we have just had a rollcall vote. I would suggest we suspend for 10 minutes.

Mr. CARNEY. I would concur, Mr. Chairman.

I think right now we are getting to the substance of this.

Mr. SCHEUER. We will suspend and then hear Dr. Jovanovich.

If you have further words, fine, and we will yield to members of the committee for questioning.

The subcommittee will suspend for 12 minutes.

[Recess.]

Mr. SCHEUER. Our hearing will resume.

Dr. Jovanovich, you were just on the point of adding to our enlightenment.

Mr. JOVANOVICH. I would prefer to have the question repeated.

Mrs. GORSUCH. Mr. Chairman, I am sorry——

Mr. SCHEUER. Do you want me to repeat the question?

I would be happy to as best I can without any stenographic copy before me.

My question was based on some informal communication we have had from about a dozen and a half or so major companies in the synfuels business.

We did a survey, an informal survey, and I am not trying to say it has any exact scientific features. The feeling we got, a sort of an emerging consensus from industry involved in synfuels was that they felt they could do the control technology without any particular assistance from EPA or anybody else, but what they needed was differentiated long-term health data.

They didn't want to be stuck in the bind of the Hooker Chemical Co., where they got suits on every conceivable variety of long-term health effects, some of them very speculative, very marginal, very unlikely where they had to protect themselves against everything and where they had to design control technology that would protect against every conceivable remote health risk which is a very expensive undertaking.

What they wanted to do is—what they wanted to have are the major long-term health risks that it would be cost effective to design control technology to meet; that the difference between meeting virtually all of the major health threats, 90 percent, and all, was an enormous quantum jump almost in cost and that enormous savings could be effected and a much more cost effective technology could be produced if they had long-term health effects data.

My question was, is this more or less the way you perceive your mission to give them that kind of data and then let them get on with doing their thing or do you have a different perception of the kind of R. & D. that EPA ought to be doing and I am talking specifically now about the energy field.

Mr. JOVANOVICH. I am aware, because I have talked to industry, that they would like us to work in the area of health effects testing and they feel that is our responsiblity and I would agree.

I am somewhat familiar with the work that has been done in the past in that area and one of the problems has been really a lack of samples which are representative of the emissions and the wastes from the synthetic fuel plants.

We have also spent our money in a lot of other directions. We have recently made the decision to discontinue pollution control guidance documents after spending $6 million and producing only one draft document and that draft document was very weak from a technical and policy standpoint and it seems a little unrealistic that a single report could give all answers to all the questions on synthetic fuels.

[Question and response follow:]

Question. How much money has EPA spent on research to develop Pollution Control Guidance Documents? What specific research has this funding supported and does the Agency intend to continue this research? If not, explain why? How many Pollution Control Guidance Documents have been or will be produced? Who specifically is evaluating the documents for the Agency and what are the results of this evaluation? How does the Agency intend to use these Pollution Control Guidance Documents?

Response. Approximately $6,054,000 was expended to develop Pollution Control Guidance Documents, a complete itemization of which appears in Enclosure I. Most of the funding supported document preparation and supporting analysis, as pointed out in Enclosure I. The Agency plans to reorient this program to assure that EPA is both using its resources most effectively and responding appropriately to the permitter's needs for environmental control technology information for the synfuels industry.

Only one draft Pollution Control Guidance Document (i.e., the Lurgi Indirect Liquefaction Document) was circulated outside the agency to DOE for review. All others were only internal drafts. A complete listing appears in Enclosure II.

An extensive evaluation occurred concerning the guidance program over the last several months (both internally and externally). This evaluation resulted in the decision to discontinue pollution control guidance documents. There were extensive comments received from the U.S. Department of Energy, the American Gas Association, Chevron, the National Council of Synthetic Fuel Production, and the National Resources Defense Council, among others.

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The Agency plans to restructure the generic guidance concept of Pollution Control Guidance Documents by implementing a case study approach for synfuel plants. This approach will be conducted in two parts: (1) preparation of technical manuals of individual plants; and (2) direct assistance to permit writers, by providing them with technical experts (as part of a task team) for discussions concerning the technical characteristics of synfuel plants.

ESTIMATED PCGD BUDGET

PCGD CATEGORY		$ x 1000 by FISCAL YEAR (Actual) FY 79	FY 80	FY 81
Coal Base Technology	Contractor			
o Low BTU Document	Radian	0	50	50
Supporting Analyses*	Radian	69	72	110
Sub Total		69	122	160
o Indirect Liquefaction Documents	TRW	0	150	150
Supporting Analyses*	TRW/Radian	65	464	907
Sub Total		65	614	1057
o Direct Liquefaction Documents	TRW	0	0	170
Supporting Analyses*	TRW	0	350	237
Sub Total		0	350	407
Oil Shale Technology				
o Oil Shale (all volumes)	DRI	0	500	1686
Media Experts				
o Headquarters Oversite	ACUREX	0	150	250
	FY Totals	134**	1736**	4184**

* These funds primarily represent the data analyses contained in PCGD volumes II and III.

** $6,054,000 expended through 10/22/81.

Enclosure I

List of Indirect Liquefaction PCGDs

Fuel - Technology (Radian/TRW)	PCGD - Process	Volumes	Date
1. Coal-Indirect Liquefaction	Lurgi Technology	I, II, III	Aug. 14, 1981
2. Coal-Indirect Liquefaction	Lurgi Technology	I	July 31, 1981
3. Coal-Indirect Liquefaction	Lurgi Technology	I	June 26, 1981
4. Coal-Indirect Liquefaction	Lurgi Technology	II	May 15, 1981
5. Coal-Indirect Liquefaction	Lurgi Technology	III	June 26, 1981
6. Coal-Indirect Liquefaction	Lurgi Technology	I	May 1, 1981
7. Coal-Indirect Liquefaction	Lurgi Technology	I	March 10, 1981
8. Coal-Indirect Liquefaction	Lurgi Technology	I	Oct. 31, 1980
9. Coal-Indirect Liquefaction	Lurgi, Texaco, Koppers	II & III	May, 1980

List of Other PCGDs

Category	Contractor	Products/Titles
1. Coal-Low-BTU	Radian	Discussion Draft PCGD Vol. 1 Discussion Draft PCGD Vol.2
2. Coal-Direct	TRW	Draft PCGDs for Exxon, SRC-I, and SRC-II Processes
3. Oil Shale	DRI	Draft PCGDs for 6 Oil Shale Processes

Enclosure II

Mr. SCHEUER. No one suggests one report should or could.

Mr. JOVANOVICH. Our emphasis was in that direction. There was a great deal of money being spent in synthetic fuels not only on pollution control guidance documents, but a lot on theoretical projects and pollution control projects to take pilot plants to the field which never really developed——

Mr. SCHEUER. Dr. Jovanovich, excuse me for interrupting, but our time is very short.

This is the last question I am going to ask you and then I will yield to my colleagues.

Can you give me a specific answer?

Mrs. GORSUCH. I think the answer is, very specifically, yes. I think we would concur that our real responsibility and role in terms of research and development for synfuels production does lie in long-term health risk assessment and would be of benefit not only to the regulated industries, but also to the country at large.

I further concur——

Mr. SCHEUER. The cities and States, as well as the Federal Government?

Mrs. GORSUCH. Indeed.

I would concur our moneys, to the extent they are going into specific control technologies, might not necessarily be spent, as you indicated, given certain goals.

We find that industry can largely meet those goals if they are clearly defined. So that research money need not necessarily go into specific control research, but rather on the long term health risk assessment.

Mr. SCHEUER. Thank you very much.

Congressman Brown.

Mr. BROWN. Mrs. Gorsuch, I am sure you are aware that the rumors of the budgetary reductions impending for EPA have created some consternation.

I gather that has been made clear to you in earlier appearances and I suspect it has the effect both in the bureaucracy, as well as in the Congress.

In general, I am pleased with the thrust of your statement, but I can see how it would generate increased fears in some respects.

I have looked at page 12 where you say that reductions in the number of management layers of administrative staff are necessary to preserve ORD scientific staff.

In a sense some could translate that into something similar to what we heard in Vietnam where someone said it is necessary to destroy this village in order to preserve it.

I am sure that is not your purpose, but the problem we see over and over again in changes in organizations and reductions in personnel, they are invariably justified on the basis they are going to simplify, streamline, improve efficiency and so on of a particular organization, whereas sometimes there is a hidden agenda based on philosophical reasons or on personnel.

You may feel that you inherited an organization filled with environmentalist extremists, for example, and you have to get rid of them and this is the justification for it.

When you have done that, then you go back up to what you would really like and it is filled with a different kind of people more to your liking.

Can you give us some reasonable assurance that this is not the situation?

Mrs. GORSUCH. Congressman Brown, I have no hidden agenda. I do have a real concern about the present management systems in research and development and I tried to outline for you the facts that cause that concern.

I think that it really needs to be improved in terms of production and being responsive to the agency's program needs.

We also need to have an improvement in our strategic planning for long-term research and development and I don't think there is much question, at least in the community that I am familiar with, that we need to improve the quality of the research and development and the science on which the agency bases its decisions.

That is definitely my agenda. It is one that I intend to pursue and I would hope that, in dialog with this committee you would be of assistance to me there because I know that is a common concern and one that we all share.

I have been looking at the figures. I would hope it would paint a picture where we need to put more emphasis on our hands-on technical research and development production rather than in the management overlay that I have found.

Mr. BROWN. what makes your statement credible is the fact that you are reiterating something that we have said in this committee and others have said.

I am not faulting you on that, but you are citing some very specific figures; you are noting the 40 percent overhead in ORD and what I want to be able to do in looking at this again a year from now is to have you show me you have reduced the overhead from 40 percent to x percent and that you have solved some of the problems that are involved here.

I want to be very specific about it.

We know that there is poor research over there, poor research planning.

When you mentioned the need for an improved framework of strategic planning, you know how to touch a person because we have been stressing this for some time.

To give you an example, we made the study about the Chess program several years ago. It is an epidemiological study. The results were poor from a scientific standpoint. You want to improve that.

Your proposal, however, seems to be to eliminate epidemiology.

Now, perhaps there are suitable alternatives, or perhaps I should say—when I say suitable alternatives, there are other ways that epidemiology will be performed.

My criticism and the criticism of this committee was not to the fact that we don't need epidemiology, but that we need good epidemiology and we trust you will get good epidemiology in some fashion even though you are apparently proposing to eliminate a lot of the long-term epidemiological research.

Would you like to comment on that?

Mrs. GORSUCH. Well, Congressman, I concur wholeheartedly that we do need better and more epidemiological studies in an ever in-

creasing proportion in terms of our regulatory needs. What we are finding, however, is that to create epidemiological expertise in each agency of the Federal Government is probably not a very wise husbanding of resources.

I concur with you wholeheartedly that we do need to continue to use more and better epidemiology but to recreate that equality program in EPA as opposed to the other Federal agencies where that type of work is done does not seem to us to be a wise expenditure of money.

We hope to tap into the resources that are available to us throughout the rest of Government rather than recreating an expertise.

Mr. BROWN. I want to be specific about this. We had testimony before this subcommittee several years ago that involved the creation of the so-called cancer maps done in the National Cancer Institute in which they did some rather rough epidemiological studies based on statistics gathered from counties and States as to the incidence of cancer around the United States.

These are extremely important and valuable, not particularly sophisticated or refined, but assuming that NIH or the Cancer Institute has a better capability to do epidemiology than you do—and this seems to be a reasonable assumption—will you be able to tell us how you are relating the thrust of your research to the activities going on there in a constructive way that gets better results and saves money at the same time?

Mrs. GORSUCH. As you indicated, I certainly hope to be able to do that in a year from now, with a great deal of specificity. Today in terms of the present interface, I would defer to Dr. Jovanovich to see if we could relate to that interface today.

Mr. JOVANOVICH. The demands put on epidemiology by the regulatory process are very severe. You need qualitative multivariant studies and this is very, very expensive.

We had the choice of dramatically increasing the size and expense of our epidemiological program or relying more upon other agencies and our contribution overall in epidemiology was a small fraction of what is being done in Government.

The designation was largely made before we arrived, but we concurred that the best approach was to get more involved in the epidemiology work being done by other agencies and make sure that the information we needed was being generated by those studies.

In general, particularly the health standpoints are studied by a lot of agencies and do not need to be specifically targeted toward environmental concerns and can give us the information we need from epidemiology.

Mr. BROWN. We are also similarly disturbed by the fact there seems to be a reduction in health effects research in other agencies of the Government. It will be difficult to demonstrate how the cumulative result of all these reductions is going to make this major contribution to improving a vital area which you are admitting needs to be done, but we will go into that later.

I was impressed and pleased to see that you are focusing on some aspects of this such as the development of the monitoring and individual dosimeter type of things will allow you to get information if properly organized, with regard to the exposure of much larger

populations. This is fundamental to good epidemiology if you couple this into a plan aimed at utilizing this information.

EPA, by identifying the pollutant and helping develop the dosimeters, can make a large contribution, a valuable contribution to the overall Government program here.

We have never yet had a government-wide program that assembled the contributions that several agencies could make into a comprehensive program on this long-term basis which, of course, involves having some sort of strategic plan, which I trust you will be in the process of developing here.

I see a lot of affirmative nods.

You have referred to the use of your special advisory group and the fact that it will be making reports to you and you also have made references to the auditing procedures on your extramural contracts that your I.G. office will be doing.

I think this subcommittee would be very much interested in being kept informed as to whatever information develops through these operations so that we can see if we actually are developing a base for a solid improvement in the processes that are going on here.

In the past our efforts have always been concentrated on trying to improve what we knew to be a fairly weak process.

It is unusual, however, to have agency administrators come in and say, we can improve this process by drastically cutting it, as you are doing.

In the past we have been told, we know the problem. It just takes a little bit more money to solve it.

You have a heavy burden to demonstrate that your response is better than the one we got before, which we know is not perfect.

Mrs. GORSUCH. I understand that. However, I think the burden is also a challenge and very frankly when we look at the scientific development process for any particular research project, that because of the overlay in the decisionmaking process that I described, is delay between proposal and actual implementation, the beginning of an implementation, by a factor of 18 to 24 months; that the areas for significant improvement are apparent to all of us, and I understand the burden that I have assumed is the challenge I look forward to and I think we can significantly enhance our research and development responsiveness to regulatory needs by condensing that decisionmaking process by involving fewer loops in the mechanism, and better the management overall.

Mr. BROWN. I just have to tell you that there are a lot of paranoid people up here who feel that you really aren't committed to the achievement of a healthier population and a better environment and they will look very suspiciously on what you are doing.

I don't have that particular predisposition or paranoia, although I perhaps could get it very easily.

But I am interested in seeing very specific indications that we are making the kinds of improvements that you have indicated you are desirous of achieving.

You have said all the right things here about the needs that we know exist.

Now I am going to ask you a year from now—and believe me, I will still be here a year from now—as to whether you have made any progress in meeting these needs.

Mrs. GORSUCH. I think this is a fair approach. In terms of our scientific advisory report, I should tell you they have apparently debated reconfiguration internally for a long period of time and those decisions, as to what configurations the Science Advisory Board finally assumes, are theirs to make.

They will be meeting in the near future in terms of how we expect to use them in an enhanced role. We would hope that major regulatory activities undertaken in the next year, approximately 12 to 14 is the number approximating, would go through the Science Advisory Board and there would be an enhanced role for them to play in the entire regulatory process.

That is kind of an update in terms of specifics, where that board is now.

In terms of the Inspector General's report, I think we will all be looking forward to the information that that produces and will be happy to share it with this committee on an ongoing basis.

Mr. SCHEUER. I am going to yield for just one question to my colleague, Mr. Gore, because it is totally relevant to the line of questioning Mr. Brown took and then I will yield to my colleague, Mr. Carney.

Mr. GORE. Thank you, Mr. Chairman. I hope it is not inappropriate for me to get one question in briefly here.

I am a little troubled by the responses, both to my colleague from California and my colleague from New York; first with respect to epidemiology. It cannot be done elsewhere if the budget for epidemiology in all of the other relevant agencies has also been cut back significantly and it can't be coordinated if the interagency regulatory liaison group charged with that function has been eliminated.

There is the same disingenuity detected in the response, Chairman Scheuer, on the narrow question of long-range health effects in the energy-related function.

If I remember your response, Mrs. Gorsuch, it was that you think the agency does have a role there and should be playing that role, was that correct?

Mrs. GORSUCH. That is true.

Mr. GORE. Now, in the fiscal year 1981 you are spending $3,651,000 in that function.

In the current year you are spending $1,615,000, a reduction of almost half, and you are proposing for fiscal year 1983 to spend zero dollars and zero cents.

That just doesn't jibe with what you are saying.

Mrs. GORSUCH. Mr. Gore, you have asked many questions.

Let us take them, if we can, one at a time.

Mr. GORE. Do it in reverse order if you would and take the last one first.

Mrs. GORSUCH. I will try to meet that challenge.

There are proposals in our budget for 1983 which will be made to this Congress with all other proposals and budgetary considerations for the Congress in January of next year, so that any information that you have in terms of budgetary proposals in 1983, I

would like to point out is not only premature, but necessarily inaccurate.

That is still very much under negotiation between our agency and the President's Office of Management and Budget.

Mr. GORE. But that is your proposal to the Office of Management and Budget. I mean the normal process of negotiation is for the agency to outline its needs to the Office of Management and Budget and then for OMB to attempt to reconcile that with the overall budget constraint.

Instead, you are telling OMB that you don't need any money for this category.

Now, if the process of negotiation continues, I suppose we will have to rely on OMB to urge you to spend more money in that specific line item category.

It would be a most unusual process.

Mrs. GORSUCH. Mr. Gore, let me correct you.

The proposals that have been made or that you are referring to I don't endorse and I don't know the source of them.

I have made certain proposals, as have all agencies, to OMB for 1983 budgetary purposes. Those are very much under negotiation.

As I indicated to you, the budget for our Agency, like all others, will be proposed by the President early next year.

At that point——

Mr. GORE. Let me interrupt you there if I could.

I don't understand it when you say you don't endorse a proposal that EPA makes to OMB. EPA did make this proposal to OMB, is that correct?

Mrs. GORSUCH. That is what I was drawing to your attention——

Mr. GORE. Is that correct or not?

Mrs. GORSUCH. In terms of the specifics you are referring to, I do not know. I don't know what you have in front of you.

Mr. GORE. I have the document that EPA submitted to OMB.

Now, you see there is a certain difficulty in communication that you have with not just this committee, but several committees, because you say that your intention is not to eliminate a particular function, but then you tell OMB that you don't need any money for that function.

Now, in order to evaluate what you are saying, we look at the submission to OMB and ask you about it and you say, I have no knowledge of that.

I don't think you are being candid in that response. I think that you have knowledge of EPA's submission to OMB and I think the other witnesses at the table here also have knowledge of the presentation.

I have got the slide projection presentation that you gave to OMB with all these numbers.

Now, if you come here and say, those aren't our numbers and therefore they do not reflect my intent, then that is not a candid response.

Mrs. GORSUCH. Mr. Gore, please don't misunderstand me. I do have knowledge of our submission to OMB.

My remark was that I don't have any knowledge of the specific figures that you are citing.

I will be happy to defer to Dr. Jovanovich on the specifics of any issue, but I do want to emphasize, as I have in prior hearings, that the decisionmaking process for the 1983 budget is one that is ongoing, is not final and is in a stage, like all other agencies and departments in Government, of negotiation between our Agency and the President's Budget Office.

I think to discuss any aspect of it would be both misleading and premature.

I would like to have the opportunity to address the other aspects of your question.

In terms of the budgetary commitment to other research and development programs throughout the Federal Government, especially on epidemiology, I frankly do not have firsthand knowledge.

In Interagency Regulatory Liaison Group, that was a voluntary group among the heads of the various regulatory agencies that has both its independent budget and its staff.

There was a decision not to keep that particular format for interagency discussion but rather to elevate the Interagency Liaison through the regulatory process by placing that under Vice President Bush's Regulatory Reform Task Group.

I think that addresses all of the concerns you have raised, except for the very specific one and I would ask for just a moment to examine what you have given me.

Mr. GORE. I hope it will refresh your memory.

In asking you about this, I don't want to blow this one-line item out of proportion. It is only one example of many, many, many line items that you have cut away below what is needed to continue the particular function.

You will come and say the function is important, and I have no intention of stopping this function, but then you go to OMB and say: We don't need any money for this, we don't want any money for this.

Have you had an opportunity to review it?

Mrs. GORSUCH. As you know, the energy research and development overall expenditure by the Government is its largest expenditure in 1981, in 1982, for research, as opposed to all other programs.

I think there is need for significant reduction in research and development on energy matters. At the same time, emphasizing the very valid and legitimate need for risk assessment of health objectives and energy research and development as the chairman has pointed out.

There is nothing disingenuous about this.

Mr. GORE. It is the height of disingenuity for you to tell the chairman that you believe EPA should perform this function, this very narrow function of long-term effects related to energy.

And he was asking it in the context of synfuels and your response was: Very specifically, Mr. Chairman, the answer is yes.

And then you elaborated on it. There was no if, and, or but.

Now you look at the submission to OMB and you are requesting zero dollars and zero cents.

This is an example of your approach with the Congress generally and with OMB generally.

Now, you have managed so far to come up to the Congress and try to skate around these enormous concerns that are being expressed on the part of the overwhelming majority of the people in this country that don't want to see activities like that eliminated and your response in general terms has been: Well, I think that there are legitimate concerns there, and we think we can do them more efficiently, and you are going to be pleasantly surprised with how much better we are going to do with a slight reduction in funding.

But then when you contrast those general statements with the action that you have taken at EPA, the contrast could not be more stark, and this one specific example is only one of many.

Now, how do you reconcile your statement to the chairman that you think that specific function is a necessary and valuable one for you to perform, with your request to OMB for zero dollars and zero cents in order to perform that function?

Mrs. GORSUCH. Mr. Gore, I think there is misunderstanding. In terms of research and development for energy research, there is not a zero dollar——

Mr. GORE. Long-range health effects. The one-line item that you have in front of you there.

Mrs. GORSUCH. In terms of that one specific line item, I understand that that is—I am reading—it is the validation of the most promising bioassays in estimating the genetic toxicity of synfuel products and byproducts.

I think that that——

Mr. GORE. And what does it say under fiscal year 1983?

Mrs. GORSUCH. In that particular item is sales zero. Now, to say that that one-line item represents what the chairman is talking about in terms of long-term health effects from the environmental aspects of energy development——

Mr. GORE. That is the only line item that reflects that. Except for epidemiology which was the substance of your exchange with Congressman Brown.

Now, the reason I think this is important, Mrs. Gorsuch—I am going to say this carefully—I think there is something deceptive about the approach that you have taken to the oversight committees of the Congress who are expressing these concerns about what is going on at EPA.

Now, I have asked you the specific question, but I want it to be an example of the large question, because there are many such examples. This is just one particularly good one.

You told the chairman, "I believe there is a legitimate function for EPA and value and that we ought to perform." But you told OMB: We want zero dollars and zero cents to do it.

How do you reconcile that?

Mrs. GORSUCH. I have told the committee I think there is a good deal of need for reorganization of the research management system within EPA and the functions that they are performing, in terms of what is currently going on and what needs to be done in the future and I intend to follow through on those reexaminations——

Mr. GORE. That is another what I would call glittering generality that manages to avoid the specific question.

You have two responsibilities. You have the responsibility to complement the policies of the President who has appointed you, consistent with your responsibility to administer the laws of the land, and you have a responsibility to this Congress and to the American people, quite separate from what the individual philosophy of the new President might be or what your individual philosophy might be, and if you find that you cannot reconcile those two responsibilities, then I think you have problems that are only going to get worse, because the game is up, the glittering generalities are not going to cut it any more.

There is going to be hearing after hearing after hearing, you are going to be at the Commerce Committee a week from tomorrow, we are going to be going over the same exact process in other items.

The Senate is concerned. And if you find it is impossible, you may need to just change your approach.

I apologize to the subcommittee for taking up too much time on what I thought would be a brief question.

Mr. SCHEUER. You will have your turn, Congressman Gore.

Mrs. Gorsuch, I take you at face value and I assume credibility, but you have said that the long-term effects, long-term differentiated health effects of energy pollutants is important and that is a very sophisticated and very demanding program of R. & D.

I quite agree with you that it may very well be that EPA does not have a monopoly on wisdom and virtue in health effects R. & D.

There are lots of other resources in the Federal Government. We have the National Center for Disease Control in Atlanta. We have the entire establishment of NIH, the National Institutes of Health.

We have the National Science Foundation. We have the National Academy of Sciences. We have private, outstandingly fine research facilities at our universities and medical schools and it may be that out of the whole spectrum of terrific R. & D. capability that we have in this country, outside of EPA, you may want to construct a carefully designed, well-articulated, comprehensive multidisciplinary R. & D. program to get at these differentiated long-term health effects.

We hope you have something like that in mind, because when you come in with a zero budget in R. & D. for long-term health effects in fiscal year 1983, absent some kind of—you know, nature abhors a vacuum and you have created a vacuum and the Congress is not going to be satisfied to see that vacuum.

Absent some kind of well-designed program for using all these other resources, somebody's credibility is going to come under serious question and very soon.

That is all I want to say.

Mr. GORE. Would you be kind enough, Mr. Chairman, to allow John Hernandez to respond to that?

Mr. HERNANDEZ. I think I can respond to some of the specifics. I understand your concern, trying to read budgets and trying to translate them into reality is a very difficult thing.

I think an analysis of our budgets and how we do things in EPA in the research game, that the risk assessment piece does lie there still in many, many others, probably a dozen other budget items.

Let me give you one that I know about specifically where I had conversations with people just in recent days concerning.

This has to do with using the risk-assessment process in identifying those toxic substances that we ought to put research priorities on and it is a good tool for that kind of thing, because you don't need to have all of the data, you don't need to have a lot of precision.

[Question and response follow:]

Question. Explain the "risk assessment process" that the Agency will use to identify toxics substances given priority in research efforts.

Response. Risk assessments provide a method of establishing priorities for further research activity on chemicals. For instance, in our Toxic Substances program the enabling legislation directs the establishment of an interagency committee to make recommendations on chemicals to be considered for further toxicological characterization. They use existing hazard information together with chemical exposure information including but not limited to production volume and worker exposure. These preliminary toxicity and exposure data are combined to form a relative risk assessment that helps identify those agents most needful of further study.

As another example, chemicals are evaluated in the Research and Development Office for potential adverse effects they may cause and the degree to which exposed persons may be at risk from contact with the chemicals. In some cases these risk assessment activities identify data gaps on chemicals which require further research before more substantive evaluations of risks can be made.

All you need to have is relative facts. Our people are doing that kind of thing, today, to do what the industry feels has to be done. I had those things that need that kind of long term—doing it. I think we are doing it. I really believe that.

Mr. SCHEUER. Congressman Carney.

Mr. CARNEY. Thank you very much, Mr. Chairman.

For a minute, I thought the minority were orphans.

I would like to ask, if I might, a little bit perhaps out of the line of questioning, of my colleague from California, Mr. Brown, if he might be able to check his source as to the fact that he will be here next year to find out if I will.

I am not that well-connected and I am wondering if you could appeal in my behalf.

Mr. SCHEUER. In addition to chairing this committee, I am on the Communications Subcommittee of the Congress and I would be happy to confer with you.

Mr. CARNEY. I would be a little worried about that.

Mrs. Gorsuch, have you determined what the EPA must do to meet its statutory requirements and what the minimum resources of personnel and funding would be needed to fulfill those requirements?

Mrs. GORSUCH. In an overall sense, that is an ongoing responsibility, Mr. Congressman, as you well know. Those statutory requirements have been added to, they are continuously shifting in terms of our particular delegations of different programs to the States and that is ongoing responsibility that, indeed, I do meet in terms of our budgetary analysis each year.

[Question and response follow:]

Question. What particular delegation of different EPA programs to the States have occurred or are being proposed by the Agency?

Response. The "Delegation Snapshot" demonstrates the status of program delegation to 56 States and territories in nine delegable programs as of July 1, 1981, and is found at appendix C.

Mr. CARNEY. Have you put down in black and white the figures, both in money and manpower, to meet those requirements?

Mrs. GORSUCH. In terms of 1982, yes, we have had our proposals before the Congress and it is currently the subject of, as you know, ongoing adjustment.

Mr. CARNEY. Have you determined that for 1983?

Mrs. GORSUCH. No, I have not.

Mr. CARNEY. I have to be honest. I haven't seen your table of organizations and I am just curious as to how we move along with budget amendments in fiscal year 1982, without having that knowledge.

Do you feel that you have properly analyzed your statutory requirements before you have made those proposed cutbacks?

Mrs. GORSUCH. In terms of 1982, I feel very confident. I feel that our budget, even with the reductions that the President is seeking, in terms of 1982 budget, we can continue to meet our statutory obligations and, in fact, do better than has been done in the past.

As you may know, the agency does have serious backlogs in nearly every one of the program branches. Most notably, I suppose, is one in terms of air pollution where there is over 1,000 State implementation plan changes that have been in the process for more than a year.

It has been my clear directive to each of our managers to concentrate on what their statutory obligation is, as given by Congress, and simultaneously to address the backlog that has accumulated in each one of their areas.

Mr. CARNEY. I don't know if the question has been answered——

Mrs. GORSUCH. Let me tell you in terms of——

Mr. CARNEY [continuing]. What I am concerned with—perhaps I can express my thought and you might be able to help me in that regard.

I am problemed with the fact that we have no identifiable evidence that EPA has, in the past 10½ months, identified just what are the statutory requirements that they must meet.

And after they have identified those requirements, make the proper association of commitment for money and manpower and if, indeed, that has happened, I would then request that you submit those figures to this committee so we could have the opportunity to look at them.

Mrs. GORSUCH [continuing]. Mr. Carney, I will be happy to do that. This is public information in terms of 1982. That is the entire budgetary process that we went through.

Identify any statutory requirements. Simultaneously, and I really emphasize this with all of my managers, identify areas of backlog responsibilities that have accumulated and those have to be the priority items for our 1982 operating plan.

Completing our statutory requirements, getting the agency to the extent possible out of a backlog situation and simultaneously meeting the challenge of the Executive order, which is to look at rules and regulations as they are developed.

[Question and response follow:]

Question. What are the statutory requirements that the EPA must fulfill under the various environmental laws and what are the minimum resources, in personnel and funding, needed to meet these requirements in fiscal year 1982?

Response. Outlined below is a description of the United States Environmental Protection Agency's (EPA) major statutory obligations. We will furnish you with the fiscal year 1982 resources as soon as we have completed incorporating the final fiscal year 1982 Congressional decisions into our budget.

CLEAN AIR ACT

The Clean Air Act authorizes a national program of air pollution research, regulation, and enforcement activities. Under the Act, primary responsibility for the prevention and control of air pollution at its source rests with State and local governments, with a strong mandate that the Environmental Protection Agency (EPA) take action where States do not fulfill their responsibilities. EPA's role is to conduct research and development programs, ensure that adequate standards and regulations are established to meet environmental goals set by the Act, support State and local control activities, and ensure that the standards and regulations are effectively enforced.

CLEAN WATER ACT

In 1982, the water quality program's major emphasis will be the implementation stage of programs authorized and established by the Clean Water Act (CWA). Regulations and planning which established the foundation for control programs are largely in place. For example: initial water quality management plans have been all certified and approved; many industrial effluent guidelines for controlling toxic discharges from major industries will be completed in 1982; significant progress toward the development of water quality criteria for toxic pollutants will be made; and much of the delegation of program management functions to the States will be achieved. With these development activities essentially complete, the water quality program will encourage implementation of control measures at the State and Federal levels through an integrated water quality planning and management process.

SAFE DRINKING WATER ACT

EPA's drinking water program is primarily a public health protection effort to ensure the quality of the nation's drinking water. The Safe Drinking Water Act (SDWA) requires that EPA develop national drinking water standards, that utilities undertake periodic monitoring to ensure compliance with these standards; and that a cooperative Federal-State effort oversee the implementation of the associated programs. Two major regulatory programs were established under the legislation which provide the foundation for EPA's activities: the Public Water System Supervision program, to assure the compliance by utilities with appropriate quality standards, and the Ground Water Protection program, to protect present and future sources of drinking water from contamination related to injection wells. The SDWA places primary responsibility for implementation and enforcement of the standards with the States. Financial assistance to States to support their delegated implementation efforts is authorized.

RESOURCE CONSERVATION AND RECOVERY ACT

The Resource Conservation and Recovery Act (RCRA), as amended, establishes the first national program to protect public health and the environment from damages caused by improper waste management operations. To handle prospective hazardous waste problems, EPA will continue to develop and initiate, on a priority basis, the regulatory program outlined by RCRA to reduce risks from improper hazardous waste management practices. We will continue our implementation and enforcement programs.

FEDERAL PESTICIDE ACT

The major objectives of the Federal Pesticide Act of 1978 are to protect the public health and the environment from unreasonable pesticide risks and permit the use of necessary pest control technologies. These objectives are pursued through four principal means: (1) Review of existing and new pesticide products, (2) pesticide management, (3) enforcement, and (4) research and development.

RADIATION

EPA's mandate to protect the public health and environment from adverse effects of radiation exposure derives from: (1) The Federal guidance and general environ-

mental standard authorities under the Atomic Energy Act, transferred to EPA by Reorganization Plan No. 3 of 1970; (2) the Clean Air Act Amendments of 1977 which provide authority to regulate radioactive air pollutants through the Act's standard setting authorities; (3) the Resource Conservation and Recovery Act and the Uranium Mill Tailing Radiation Control Act which charge EPA with providing standards for protection from waste materials with radioactive content, and (4) other authorities contained in the Clean Water Act, the Marine Protection Research and Sanctuaries Act, the Safe Drinking Water Act, the Public Health Service Act, and the National Environmental Policy Act. These legislative authorities generally prescribe an environmental assessment, technology assessment, and standard setting role for EPA. In some cases enforcement responsibilities are given to other agencies, notably the Nuclear Regulatory Commission. In these instances EPA performs some oversight functions to insure that established standards and guidance are implemented.

NOISE ABATEMENT AND CONTROL ACT

The major components of EPA's existing noise control effort are promulgation and enforcement of Federal noise regulations, the provision of financial and technical assistance to State and local noise programs, and the conduct of noise health effects research. In both 1981 and 1982, activities are being structured to achieve a prompt but orderly phase out of current program activities. This will be done in such a way so as to transfer the knowledge and experience EPA has gained to the State and local programs. This decision results from a determination that the benefits of noise control are highly localized and that the function of noise control can be adequately carried out at the State and local levels without the presence of a Federal program.

TOXIC SUBSTANCES CONTROL ACT

The Toxic Substances Control Act (TSCA) established a program to stimulate the development of adequate data on the effects of chemical substances on health and the environment and to regulate those chemicals which present an unreasonable risk of injury to health or the environment. The law contains several major authorities. First EPA may require manufacturers to conduct, at their own expense, health and environmental effects testing on designated existing chemicals. Second, the Agency may require the private sector to provide a broad range of basic information on chemicals; this includes information the government might not otherwise receive, such as reports of substantial risks (chemical data) or employee and consumer allegations that a substance may cause significant adverse reactions. Finally, TSCA gives EPA the power to control the production, distribution, use, and disposal of chemicals—new and existing—found to cause unreasonable risks.

ENERGY

EPA has the statutory responsibility to protect the environment in the course of the national program to develop and use the Nation's domestic energy resources to lessen our reliance on imported energy sources. Research and Development programs in support of that requirement are mandated by the Clean Air Act, the Clean Water Act, and the Resource Conservation and Recovery Act. Energy development and utilization cut across virtually every aspect of industrial, utility, commercial, and residential activity and thus require an exceptionally strong technical and policy basis for effective and equitable regulatory action. This energy-related environmental policy will be implemented by all agencies of the Federal Government. Additionally, EPA has the responsibility to review and coordinate the research activities of other Federal agencies with respect to the environment as they pursue their individual missions contributing to progress toward the national energy goals.

SUPERFUND

The Comprehensive Environmental Response, Compensation and Liability Act of 1980, commonly known as Superfund, was passed by Congress and signed into law on December 11, 1980. Specifically, the legislation mandates that the following major functions be carried out:

Emergency response to hazardous substance spills in all media.

Emergency response to uncontrolled and abandoned hazardous waste sites which may present an imminent danger to public and environmental health and welfare.

Long-term remedial and containment actions at sites where the responsible party cannot be identified or refuses to take appropriate remedial action.

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Assessment of damages to natural resources on lands owned by any governmental entity and payment of claims against the fund for damage to these areas.

Revision of the existing National Contingency Plan to include definitive guidelines on methods of site discovery; conduct of evaluations; alternative remedial actions; and the roles of the various Federal, State, and local jurisdictions involved in implementing the Act.

Conduct of enforcement activities designed to identify parties responsible for hazardous waste sites and spills and use of enforcement actions to induce these responsible parties to undertake acceptable removal or remedial action in the first instance.

Enforcement actions against liable parties to recover costs incurred by Federal or State agencies for clean-up actions at sites and spills.

The statute also provides an opportunity for EPA to design a joint State/Federal program. Whenever possible, States will be given lead responsibility for the identification of sites, emergency removal actions, enforcement, and the design and implementation of remedial measures.

INTERDISCIPLINARY

Many statutory responsibilities can be approached directly through specific media programs, but effective management sometimes requires cutting across the usual media lines. Often the problem, skill, or technique involved is not readily assignable to a specific media; and an interdisciplinary approach is required. This interdisciplinary approach is consistent with the original concerns of the Agency: the need for an integrated way to address pollution in all media. EPA employs this intermedia approach in several research and development efforts where the problems, tools, and results are multidisciplinary in nature and must be coalesced into an integrated program. This concept is employed in the Agency's efforts to forecast future environmental problems and to develop a long-range research and development agenda. This concept is also applied to those areas of the environmental impact statement program where the identification of crosscutting impacts is important. Similarly, a program of energy review and permitting has been included due to the need for a flexible multi-disciplinary approach in assuring that the rapid development of new energy facilities is accomplished in an environmentally sound manner.

Addedum to Response to Item 22:

Year	Chronology of EPA Legal Authorities (Authorization Acts not Included)
1970	EPA was created effective December 3, 1970 by Reorganization Plan No. 3 of that year. It received at its creation authority to administer the: - Federal Water Pollution Control Act, as most recently amended in 1970; - Clean Air Act of 1967; - Federal Insecticide, Fungicide and Rodenticide Act of 1947; and - Miscellaneous authorities related to radiation. Within a matter of weeks, EPA received authority to administer the 1970 amendments to the - Clean Air Act, 84 Stat. 1676.
1971	No significant additions.
1972	- Marine Protection, Research and Sanctuaries Act, 86 Stat. 1052; - Federal Water Pollution Control Act Amendments, 86 Stat. 816; - Federal Insecticide, Fungicide and Rodenticide Amendments, 86 Stat. 973; and - Noise Control Act of 1972, 86 Stat. 1234.
1973	No significant additions.
1974	- Safe Drinking Water Act, 88 Stat. 1661; and - Amendments to the Clean ir Act as part of the Energy Supply and Environmental Coordination Act of 1974, 88 Stat. 246 (The net effect of these amendments was probably more to diminish regulatory responsibilities than to increase them.)

Year	Legal Authorities (cont'd)
1975	- Federal Insecticide, Fungicide, and Rodenticide Amendments, 89 Stat. 751.
1976	- Toxic Substances Control Act, 90 Stat. 2796; and - Resource Conservation and Recovery Act of 1976, 90 Stat. 2796, which amended the Solid Waste Disposal Act into a regulatory statute.
1977	- Significant amendments to the Federal Water Pollution Control Act (also changing its name to the "Clean Water Act"), 91 Stat. 1566; and - Significant amendments to the Clean Air Act, 91 Stat. 685.
1978	- Amendments to the Federal Insecticide, Fungicide, and Rodenticide Act, 92 Stat. 819; - Amendments to the Solid Waste Disposal Act, 92 Stat. 3079 (The net effect of both the above was probably more to reduce resource requirements than to increase them.); - Amendments to the Atomic Energy Act of 1954 by enactment of the Uranium Mill Tailings Radiation Control Act, 92 Stat. 3021; and - Amendment to the Clean Water Act, 92 Stat. 2467.
1979	No significant additions.
1980	- Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("Superfund"), 94 Stat. 2767; - Amendments to the Solid Waste Disposal Act, 94 Stat. 2334 and 94 Stat. 2055; and - Amendments to the Safe Drinking Water Act, 94 Stat. 2737.
1981	No significant additions to date.

Mr. CARNEY. The backlogs you refer to, have you identified why you do have in excess of 1,000 backlogs?

Mrs. GORSUCH. In that particular area, yes, we have identified, I think, the root of the problem. They have simply not been given emphasis in the past administration for processing those State implementation plan changes.

We have also put into place a mechanism whereby the Federal approval process will start while the States are proposing their change.

In the past, States propose their change, they went through their entire Administrative Procedures Act and only when the State had finalized its action did the Federal approval process begin.

That caused not only delays in the whole operation, but also a certain amount of animosity between State and Federal Government in that the States never really understood what the Federal Government's answer was until after they had finalized their activity.

We put into place an expedited Federal review process which will start simultaneously with the State proposal and have a plan from our managers in air to see to it that that particular backlog is out of the way by next July.

Mr. CARNEY. Do you have an estimate of what the manpower requirements would be, the hours of manpower just to meet that one particular problem?

Mrs. GORSUCH. I do. I don't have them at my fingertips, I am sorry. Those have been factored into our 1982 budget.

Mr. SCHEUER. At this time, I would like to ask unanimous consent for any member to ask any of the witnesses to submit written answers to questions for which they don't have the answers at their fingertips.

Mr. CARNEY. Thank you, Mr. Chairman.

I would ask, then, that you provide us with your plan to eliminate those backlogs.

[Question and response follow:]

Question. What is the Agency plan for eliminating the backlog of SIP changes and what level of resources is needed to implement this plan?

Response. The Agency has taken several steps to reduce the SIP backlog including:

Giving increased priority to SIP review.—The Administrator has emphasized to regional and headquarters offices the importance of reducing the SIP backlog.

Increasing accountability among SIP reviewers.—The Assistant Administrator for Air, Noise, and Radiation has been given primary responsibility within the Agency for reducing the SIP backlog. In the regional offices, more authority for SIP review decisions has been given to the air quality program offices. New management systems are being implemented in regional and headquarters offices. Regional offices have committed to specific schedules for reducing the backlog. A computerized tracking system has been established to help coordinate reviews among headquarters offices. Average review time has been cut almost in half since the initiation of the system.

Tailoring the extent of review to the importance of the SIP revision.—New procedures have been established to categorize SIP revisions and ensure that the extent of review given an SIP revision reflects its relative importance.

Reducing the steps in the review process.—Routine SIP revisions having negligible air quality consequences are now processed as final rules without going through a proposal stage. (If any adverse comments are received during the public comment period, the revision is republished as a proposal.) Use of the direct final procedures cuts in half the number of steps for processing an SIP revision. Agreement has been reached with the Office of Management and Budget (OMB) to exempt a large

number of SIP revisions from OMB review under Executive Order 12291. Exemption of a revision from OMB review will cut more than six working days from the average processing time.

The Agency plans to carefully evaluate the effectiveness of the steps that have been taken and make additional administrative changes in the process to improve the overall quality of SIPs, as well as streamline the review process. The Agency intends to work more closely with states during the SIP review process and to increase the use of parallel processing. Under parallel processing state and federal review and public comment procedures are carried out concurrently, rather than sequentially, as occurred in the past. Parallel processing helps both to reduce the overall time necessary to process an SIP revision and to improve relations between EPA and the states.

By giving SIP review a higher priority and establishing new management systems, the Agency will be able to reduce the SIP backlog and process SIPs more efficiently without any permanent increase in resources. The Agency has temporarily increased the size of the regional and headquarters staffs processing SIPs. Once the initial backlog has been reduced, the size of the staff involved in review can also be reduced and staff members reassigned to working with the states on SIP development and other activities. Currently, about a third of the approximately 190 work years devoted to SIP development and review activities is spent on SIP processing.

Mr. CARNEY. The fiscal year 1982 budget amendments, the highly touted figure of 12 percent in all Government agencies, has been going around but in the R. & D. arena for EPA, it is substantially more than 12 percent.

It is perhaps 16 percent and in various areas within the R. & D. shop—and I would not suggest that you should be limited to 12 percent across the board within the R. & D. shop, but I do suggest it is somewhat extraordinary that a determination was made that R. & D. would be cut 16 percent instead of 12 percent in other areas.

Could you address that.

Mrs. GORSUCH. Let me try to make the record clear. The fact is the President has proposed a 12-percent reduction in each agency, in each department of Federal Government, with some exceptions. The other factor is that that is still very much under deliberation by the appropriations committees in terms of where those reductions will be affected, if at all.

The proposal by the President——

Mr. CARNEY. But your submission to the appropriate committees of the Congress, the figures, your target figures, indeed reflected a 16 percent reduction in R. & D.

Mrs. GORSUCH. Mr. Congressman, I think you are mistaken because we were asked by the President's Office of Management and Budget to propose to the appropriating committee's consideration a 12-percent reduction in each of our program accounts. Each one.

I am informed that you are indeed accurate and I am mistaken. For that, I apologize.

I do think it doesn't change the thrust of where I was going, though.

I don't think a straight across-the-board, account-by-account reduction is necessarily the best way to take the reductions the President has proposed.

I do think there is substantial room for reducing expenditures in research and development, and I want to be very candid about this, significantly, and yet enhancing the quality of the work we do, simultaneously.

The proposal, as I am informed by staff, did indeed have a 16-percent reduction in R. & D.

Mr. CARNEY. I think this might be part of the problem we are dealing with. As you know, the President proposes, but Congress disposes.

Mrs. GORSUCH. That's correct.

Mr. CARNEY. I know you were perhaps not on board and up to speed and you had some setbacks, personally, and I appreciate that, but certainly the Agency was quite cognizant of the deliberations that this committee had when we were formulating fiscal year 1982's policies.

I think to give credit to the chairman of this committee, we worked within the parameters that were set by the President to deliver a responsible budget and in so doing, we have expressed a great deal of apprehension as to whether this was the proper thing to do but nonetheless, we again expressed our willingness to give it a try.

The record will clearly indicate that as a body, the Congress feels that R. & D. is perhaps the most important function that EPA is going to have to carry out.

In lieu of the fact that we are asking industry to take on some of the responsibilities that were in the Government's domain, we know that there is going to be enormous increases in the production of hydrocarbons, particularly from coal, here in the United States, and with that, associated effects on the quality of air and water and other parameters within our environment.

We have very carefully expressed the view that R. & D. was not the place where cuts should be made. Then to turn around when we are looking at another number that quite frankly—I would not support 12 percent, but then to come back and have a 16-percent cut in this particular area, I think presents to the Congress a lack of cooperation from the Agency.

It is very distressing to me that this is happening.

We worked very hard early on to try to bring the numbers to an area that everyone could live with. We enjoyed that success, but if this is going to be the attitude of the Agency and the administration, I predict they are not going to enjoy too many more successes on Capitol Hill.

I am really appalled. The first opportunity I had to look at these numbers was late last night. There is a consideration of having a 16-percent reduction in the R. & D. area of the shop.

Indeed, I know that you have to work, or you feel compelled to work to further reduce the expenditures of EPA, but I think targeting in on some areas of R. & D. is selling short the people of the United States.

We had a reduction from $365 million to $326 million in expenditures from fiscal year 1981 to fiscal year 1982. In addition to that, we still have a rescission that was requested of EPA for fiscal year 1981 of $50 million which the Congress specifically denied, yet EPA has not utilized any of that money.

You do have a responsibility of carrying out legislative mandates and statutory requirements.

I believe there is a hesitancy for the Agency to meet that requirement and I am not so sure there is an intent for the Agency

to meet that requirement. These are particularly harsh words and I don't particularly like to use them, but I feel that the paranoia everyone is speaking about on Capitol Hill has touched this Member of Congress from the First District of New York.

We have their dialog and when we see these cuts, it flashes fire in front of me. It is a warning that I hope I am misreading and that we can sit down and work out.

I am speaking for myself. I can't speak for my colleagues, but I had no intentions of going along with the 12-percent cut in R. & D. I certainly am not going to go along with a 16-percent cut in R. & D. and I would hope that you won't resort to the tactic that you use of not spending the rescission that you asked for in the past because I don't think the Congress will continue to tolerate that.

That is not a question, I guess that is a statement, and it might be an example of this particular Member's frustration, and I would hope that these frustrations that I have will not continue to persist and we can sit down and work out fair and equitable solutions to an economic problem, as well as a problem that our Nation is faced with, with the quality of air and water.

Mrs. GORSUCH. May I respond?

Mr. CARNEY. Please do.

Mrs. GORSUCH. I understand that committee's very genuine concern that the results of research and development are necessary for environmental regulation and for the goals we have set for ourselves as a Nation.

I share that concern. But I would very much like to ask you to focus with me on the results that we are all undertaking, rather than on the expenditures that have been made in the past in terms of reaching those same results.

I hope I have painted for this committee a picture of real management challenge in terms of the Office of Research and Development. In terms of whether we are able to produce, in quality, and in responsiveness to regulatory resources and needs.

That is where I hope to see the emphasis for research and development. I know that you share that concern and I will look forward to keeping that dialog open with you in terms of what we produce in enhancing our quality and our responsiveness.

Mr. CARNEY. I certainly do share that concern, but on the other hand, I don't have the confidence in the magic that you might have. I don't see how you can severely cut back in areas in R. & D. at a time when it is in my belief and I would say the majority of the Members of Congress belief that R. & D. is the area you should be putting emphasis on, because of what we are asking of the private sector.

We are going to have to come up with the proper scientific data to identify levels of pollution and ways of controlling pollution that are effective and economical so that we can get our economy moving. And this is going to be a responsibility of the Federal Government. We can't turn that responsibility over to industry. First, I don't believe they will accept it and, secondly, I don't know if in all candor, it is the proper arena for it to be in.

I can't understand what I have termed the magic. I agree that you don't solve problems by throwing money at them continually. And your statement about having an imbalance of administrators

versus scientists, that is very laudable, and I would hope that that would be corrected. But what concerns me is, even with all the money that the agency has had, the signs—and you even admitted in your statement—has been at best unacceptable. That is terrible.

How is this magic going to happen, where we cut back on expenditures and we are going to get better answers? I don't see that and I am very concerned about it.

Mrs. GORSUCH. The ones that you pointed out in terms of the present administration of the program, where it is topheavy with management and, in fact, really smothers the creativity of the scientists who are asked to do the hands-on work, when you put them through a process for making a proposal for research and development, that is massaged over a period of 24 months, and indeed requires a good deal of expenditure of Federal funds, it does not necessarily produce any better research results.

I think that is obviously part of the "magic" that you are going to be expecting this agency to perform and it is certainly a challenge that is inherent in our administration.

It is one we intend to address. I don't think it is sufficient merely to come before you and describe a problem if indeed we are not going to address that problem in the administration of the agency.

Congressman Brown put it very well, he is going to hold me to a strict report card a year from now and I hope that is the case. We expect very significant savings in the area that also enhance the overall effort by simply addressing some of those management concerns. The decisionmaking process for initiating a project and then actually getting the project started can't take 18 to 24 months.

It can't continue to go through research committees that are not tuned to or responsive to the program's regulatory needs. Those are areas where I think there is a definite need for improved management.

Mr. CARNEY. And I would hope you would install those improvements. I will just conclude by saying, Mr. Chairman, I think I am about 12 minutes into the program and I know I am bending my time, but I would like to say one thing in conclusion, looking at one budget that I have some concern about, and that is the activities in energy development and what our role is going to be in that.

The budget for fiscal year 1981 was $105 million in energy R. & D. You had that 24-months program and there is a lot of mismanagement and I am sure we can cut back $105 million. So in fiscal year 1982, we cut it back to $70 million and in fiscal year 1983—and I know we are dealing with some slides up here and we don't know if they are correct or not, but in fiscal year 1983, on good authority, we are going to cut that back to $35 million.

Now, to me, to reduce this particular area 70 percent in 2 years, an area that in my opinion should be expanded because of our complete change in this Nation, in the way we are going to produce energy, is either magic or something that this Congressman has no comprehension of.

Mrs. GORSUCH. I understand and I do feel we need to cut back, not only in terms of the good management I propose, but also in the research projects we are undertaking.

It would be hoped that certainly the expenditure of—I am using the figures you cited—$105 million in 1981 and then the $70 mil-

lion in 1982 would produce some results on which we could continue to build, rather than continue to continue research.

I think we need to refocus the agency's efforts in research and development in energy as the chairman suggested, in terms of long-term health risks, rather than control technologies to meet standards.

I think we have to do our research and development to set standards for industry, rather than developing new technology for them to meet those standards.

Mr. SCHEUER. If the witness will yield, I wish to point out that not only have you had this Draconian cut in R. & D., in EPA, but that has been accompanied by approximately a 40-percent cut in energy R. & D., in the Department of Energy, so they aren't filling this vacuum that's being created. I don't quite know who is, but I can tell you that this Congress is going to want some hard and specific answers to when and how this comprehensive multimedia research and development program is going to be affected.

You have given us some fine reassurances that an unkind person would say are glittering generalities and innocuous platitudes and I won't use that language, but in some point in time, in a rather short timeframe, we are going to expect some very specific hard answers as to where, in the whole spectrum of this country's R. & D. capabilities, an adequate comprehensive R. & D. program is going to take place in the field of energy to meet this tremendous national goal of freeing ourselves from continuing slavish dependence on Persian Gulf oil.

I now yield to my colleague, Claudine Schneider, from Rhode Island.

Mrs. SCHNEIDER. I thank you very much, Mr. Chairman.

I have several questions I would like to get across. Ms. Gorsuch, in your statement, you made very much of the need to eliminate some of the unneeded layers of bureaucracy that exceed the scientific research and yet your peer review process, as you outline it on page 7, really proposes to require at least seven agency officials to review any piece of research work before it can be released by the agency.

Mr. Hernandez, I am sure you are aware, has been quoted in Science magazine as pointing out that the peer review system was modeled after the U.S. Geological Survey, which "has the reputation of being the slowest-to-publish staff in the world."

Quite frankly, it seems like your system sounds particularly stifling and I wonder how you can anticipate to promote the morale of your scientists and to gain credibility and integrity of the research, with this kind of bureaucratic overlay?

Perhaps since Mr. Fernandez made this statement, we can have him address that question.

Mr. HERNANDEZ. Let me start in, Congresswoman Schneider, with your remark on how you can increase the morale. The best thing that we can do for the morale of EPA scientists is help them gain confidence in their ability as scientists.

The best way we can do that is by making sure that what the agency puts out, overall—overall—has high credibility amongst scientists around the United States and around the world.

And our efforts are directed at doing that very thing, the kind of thing that will give them pride in the future, as to the quality of the work they are doing. So I think we are on the right track in that area.

Mrs. SCHNEIDER. I think in the scientific community, it is common knowledge that one has the opportunity to have various individuals, university professors or scientists in different areas, to review scientific papers. It just seems to me that perhaps you are saying you are going to eliminate the bureaucracy, which I am most enthusiastic about seeing happen, not only in EPA, but in a broad spectrum of other agencies, and there seems to be some incongruity, when you yourself imply, and you were quoted in Science magazine as saying this, that this process is not the most efficient way to get a job done and it could be a demoralizing bureaucratic process.

Mr. HERNANDEZ. I don't think I said all of those things, Congresswoman.

Mrs. SCHNEIDER. That's correct.

Mr. HERNANDEZ. Let me tell you what I did say. I said that this peer review model was modeled after the U.S. Geological Survey's model.

Now we do not have one agencywide. We need one because we put out a lot of trivia that is not grounded on good science. We must have one, if we are going to be credible across the board.

Now, this process was designed by an organization that has not only a reputation for being one of the slowest to publish, but a reputation for being one of the best agencies of Government in terms of science.

I would like to see us move from the worst and the fastest to some place in the middle.

I wonder if you have seen the peer review process?

Mrs. SCHNEIDER. I am familiar with an overview of it.

Mr. HERNANDEZ. I would like to give you a copy of it.

Mrs. SCHNEIDER. It is outlined in Ms. Gorsuch's remarks, also.

Mr. HERNANDEZ. Mr. Chairman, I have a copy with me and I would present it to you for copy and distribution, because I think it is a rather good document and it goes into the concerns about slowing down the process and so forth.

It is a good process, designed to bring credibility. It is part of our overall quality assurance and if we don't have peer review, we have nothing.

I would submit this to you.

Mrs. SCHEUER. We already have it, but it may be included in the record.

[The information follows:]

(See Appendix B.)

Mrs. SCHNEIDER. I would look up on the dedication of the Environmental Protection Agency to various long-term commitments and the whole concept of having to go through the review as has been outlined in long-term commitments and your dedication to getting a job done in a much more rapid fashion.

I think one of my concerns is that there are about 1,200 effluent guidelines, now, that need to be satisfied and to this date, there have only been 128. I sincerely question how you are going to be

able to move with speed and accuracy through such a mountain of work.

Mr. HERNANDEZ. You know, you are right. The effluent guideline business and BAT is probably one of the most troublesome we have. I can't think of one that has been more fraught with difficulties in the past and greater debate amongst people—that is, they go to court all the time—on the output of those things.

Where we are going to go on that remains a little bit of a mystery to me, simply because of the complexity of it and the difficulty that people have had in the past.

We are reviewing and analyzing the process and where we are going on those guidelines and hopefully something will allow us to meet the timetables we have already agreed to.

One of the things that I might bring to your attention is, in spite of the fact we have not met all of the guidelines and timetables on putting out BAT rules and things, there are people who have—our enforcement people have written permits and the permits are out there and are in effect and are guiding industry.

And so the process is controlled to a certain extent although the legalistic process has gone very poorly in the past.

I have to give you my concerns, too.

Mrs. SCHNEIDER. The one thing I think it is important for you to recall is that EPA is evidently on record and has testified to the effect that by 1983, fiscal year 1983, we will see the completion of effluent guidelines work. So I guess perhaps there is a common theme that you have heard from each of us that the rhetoric is fine, but we would like to have some tangible evidence just as quickly as you possibly can submit that to us, because time is slipping by. As we all know, we all have a lot of work ahead of us.

I would like to pick up on another question. Ms. Gorsuch, you earlier made the comment that EPA, of course, will be setting various standards for industry and I am a little confused about the so-called science courts and how they are actually going to function because I know that you had some questions the other day about the formaldehyde issue and I hope you will bear with me today so that perhaps I can ask a few more questions related to it. But as I understand it, in considering whether or not to classify formaldehyde as a dangerous chemical under the Toxic Substances Control Act, you convened a science court and that court evidently had one witness which was the Formaldehyde Institute, which is essentially the trade association that lobbies on behalf of the Formaldehyde Institute. From what I understand, as a result of your court's deliberations, your Office of Toxic Substances recommended that formaldehyde not be classified as a 4(f) chemical and I am just curious to know if this is the kind of science reports that we can anticipate coming out of your science courts.

Mrs. GORSUCH. Well, Congressman Schneider, I don't know the source of your information, but first of all, there was no science court convened by me or anyone else.

I did ask the Deputy, Dr. John Hernandez, who does have a scientific background, to look into the science that has been made available to the agency and all other relevant data to identify where, if at all, there was indeed scientifically sound bases for fur-

ther action, where data gaps have or do exist, and to advise me on an ongoing basis of what he discovered.

There were indeed meetings that were convened at the request of the Formaldehyde Institute with Dr. Hernandez. No recommendations have been developed, to my knowledge, from our Office at the present time.

The decision obviously is one that I have been charged by Congress with making in terms of how to proceed under the Toxic Act, and no decision has been made to date.

Mrs. SCHNEIDER. Dr. Hernandez, I wonder if you could tell us for the record, did you speak to anyone in addition to the Formaldehyde Institute on this issue?

Mr. HERNANDEZ. I wonder, Mr. Chairman, if I might read a very brief statement into the record on this issue, because I think it is important that we set the whole tone of these things rather than trying to do it on the kind of give-and-take sort of thing here.

Mr. SCHEUER. We will make your statement a part of the record. If you want to sum it up briefly.

Mr. HERNANDEZ. I will try to summarize. I really feel it is of great importantance that people understand what we did and how we did it because there has been so much misrepresentation and misstatement by people.

Mrs. SCHNEIDER. Dr. Hernandez, I only have 10 minutes. You have all the time in the world to submit your responses in writing. It is important that I have the opportunity, as the Chairman has outlined.

Mr. SCHEUER. We will extend your time for the time that Mr. Hernandez takes.

Mrs. SCHNEIDER. If you can just summarize. All I want is a straight answer to the other specific individuals that you contacted, insofar as the whole issue of formaldehyde is concerned.

Mr. HERNANDEZ. I will try to do that in just about 2 minutes, sir.

These meetings, both on formaldehyde and another one on another chemical, were held at the request of the industry being regulated.

A package came to the administrator on the day that we were sworn into office, asking that formaldehyde be considered as a 4(f) chemical. No regulatory action was proposed at that time, but under 4(f), certain steps have to be taken in a time period after the administrator recognizes that this may be a 4(f) chemical.

Because we were early in this process, we had to take some kind of steps. The people from the industry came and visited with me and said: There are flaws, there are technical problems in EPA's staff package on this chemical. We want to sit down with the staff and talk about them.

I needed to find a forum for doing that and so I asked that we get together with people from the Formaldehyde Institute, which is also not only, I guess, a lobbying group, but they have scientists associated with them, to, at their request, sit down with the staff, and some other people who have knowledge in the area, to join together and talk about the technical and scientific issues involved.

We set up an agenda that was based on the technical and scientific issues. We did not discuss any policy. There was no ongoing rules being considered at all.

We never talked about any kind of regulatory process, at all. We only talked only—I would say 99 percent because somebody may have said something else—99 percent of the time we talked about the scientific issues involved and I think it was a good process in use and our staff and the EPA staff was the group that put together the staff package.

I am not talking about having only some kind of upper-echelon decisionmakers, but whole cross-sections of EPA people.

Mr. SCHEUER. Did you keep a stenographic record?

Mr. HERNANDEZ. No. These were very open, give-and-take.

Mr. SCHEUER. Well, this is open and give-and-take, too, but we are keeping a stenographic report so the public can know what transpired, here.

Mr. HERNANDEZ. I recognize that you may have a concern on that.

Mr. SCHEUER. The concern is, Dr. Hernandez, just in case it may have escaped your attention, that there is a suggestion of wrongdoing in that you only spoke to one segment of industry.

I recognize the need for continuous formal and informal communication between yourselves and industry, between yourselves and all other segments of the Nation, the environmentalists and the health groups and so forth.

It would make your explanation of what transpired there a great deal simpler and a great deal more credible if we could show them the stenographic report.

This is why we have a stenographer here and why we have a transcript of what took place here. Anybody can read it. It is a totally open process.

I recommend that to your consideration next time around.

I yield back to my colleague and this will not be a part of your time.

Mrs. SCHNEIDER. Thank you. I appreciate that.

Contrary to the points you made, Dr. Hernandez, I have before me now a letter from the Formaldehyde Institute, and also contrary, Mrs. Gorsuch, with all due respect, you said there was not a science court held.

I would like to quote for the record just a segment of this letter which is from James Ramey, the chairman of the Formaldehyde Institute.

It says, "I would be remiss if I didn't take the opportunity to thank you for inviting the Formaldehyde Institute to participate in the first science court."

I think that is something we should take into consideration.

Mrs. GORSUCH. I cannot be responsible for another person's characterization of the meeting. A science court implies, in my mind, rules of evidence and cross-examination. Though I was not present at the meetings, it is my understanding from Dr. Hernandez, neither of those two elements were any part of the meeting and that is why specifically I do not use that term.

Mrs. SCHNEIDER. There are some guidelines that have been established as to how science courts will be run?

Mrs. GORSUCH. If indeed I intend to run any science courts, I would think there would be guidelines laid out.

Mrs. SCHNEIDER. As members of this committee, we would like to have an outline of what those science courts would consist of.

Mrs. GORSUCH. I have no present intention of creating that format, and if any such format is ever formulated, I would be happy to share the guidelines.

I have no present intention of doing it.

Mr. GORE. Can we interpret your response to mean you will not conduct any more proceedings such as the one that the Formaldehyde Institute has characterized as a science court?

Mrs. GORSUCH. No, Congressman, my response was I have no present intention of formulating a format of a science court, if indeed, if I ever do guidelines for that type of procedure, I would be happy to share them with this subcommittee.

I think going beyond that to stay there will never be any future meetings between EPA and regulated industry would be quite an extrapolation that I am not prepared to make.

Mr. HERNANDEZ. Mr. Chairman, could I just respond to that a little bit.

You know, we intended to do this in one meeting. We had an agenda laid out for about 3 hours. By the time we got into that agenda, it was clear it would last longer than that. We had no intention of doing more than what you would normally do in talking to somebody.

Mrs. SCHNEIDER. You never answered my question as to who were the specific individuals who particpated in that discussion and if it was on the Formaldehyde Institute this body would like to have that information.

Mr. HERNANDEZ. I do have that.

Mrs. SCHNEIDER. If I may comment——

Mr. SCHEUER. Why don't you let Dr. Hernandez give the list of people who participated in that meeting.

Mrs. SCHNEIDER. Fine, if he would like to submit that in writing for the record or if you have the list that is complete, you can read it into the record.

Mr. HERNANDEZ. I have a summary sheet which might be quite good.

We had three extensions all together. At the first, we had 14 EPA staff people and 11 non-EPA.

Of all those attending, the bulk were technical people.

Outside of EPA, we had two from CIIT, the chemical laboratory who did the tests on these animals and they are not with Formaldehyde Institute or EPA.

We had someone from the Oakridge National Laboratory and the National Academy of Science. In the following meetings, we had people from the CIIT in all of them.

In one meeting, we had somebody from FDA, the NCTRS animal research place in Pine Bluff, Ark. We had—let me see if I can pick up another one that was outside.

Mr. GORE. Was Mr. Byington there?

Mr. HERNANDEZ. Oh, yes. He was on the formaldehyde team. They had a number of people there and usually they numbered six to eight.

Mr. GORE. He is not a scientist?

Mr. HERNANDEZ. I don't know about John Byington.

Mr. GORE. I do.

Mr. SCHEUER. I suggest you give us the full list of the people who were present, their names and their professional affiliations or identity.

[Question and response follow:]

Question. Submit a full list of the people, their names and professional affiliations, who were present at the EPA meeting with the Formaldehyde Institute where TSCA. 4(f) classification of formaldehyde was discussed.

Response. Lists showing those in attendance, and their affiliations, at the three meetings (June 19, July 28, and August 14) where formaldehyde was discussed are attached.

It should again be noted that only scientific and technical issues were discussed at these sessions and that formaldehyde's status as a 4(f) chemical under TSCA was not a subject for discussion.

FORMALDEHYDE Session
Environmental Protection Agency
June 19, 1981

NAME	ORGANIZATION	PHONE
John Hernandez	Deputy Administrator, EPA	755-2711
Ed Klein	EPA/OTS/CCD	426-2451
Terry Yosie	EPA/SAB	755-0263
Steve Atkinson	EPA/OGC	755-0870
Ruth Bell	EPA	755-0794
Paul Milbauer	EPA/Administrator's Office	755-0409
Edwin H. Clark, II	EPA/OPTS	755-0310
Richard Dailey	EPA/OPTS/AD	755-4860
Joseph C. Arcos	EPA/OPTS/AD	755-2110
Joseph Merenda	EPA/OTS/AD	755-8043
Elizabeth Anderson	EPA	755-3968
James N. Ramey	Formaldehyde Institute	(212)764-8841
Donald Morgan	Formaldehyde Institute	828-3097
S. John Byington	Formaldehyde Institute	331-8700
Ernest M. Dixon, MD.	Formaldehyde Institute	(301)881-6920
Kip Howlett	Formaldehyde Institute	(404)491-6583
William E. Fayerweather	Formaldehyde Institute	(302)774-5780
John Bailar	EPA	426-2532
Irwin Baumel	EPA/OTS/HERD	426-2532
Dick Griesemer	Oak Ridge National Lab	624-0213
Dick Hill	EPA	755-4871
Robert Neal	CIIT	(919)541-2070
James Swenberg	CIIT	(919)541-2070
Harry B. Demopoulos	NYU Medical Center	no number

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FORMALDEHYDE SESSION
Environmental Protection Agency
July 28, 1981

NAME	AFFILIATION/ADDRESS	PHONE
John Hernandez	Deputy Administrator, EPA	755-2711
John Todhunter	Assist. Administrator Designate	755-0310
Gary Grindstaff	HERD/OTS/617B ET	755-6841
Rich Dailey	OTS/AD	755-4860
Bill Groah	Hardwood/Plywood Manf. Assoc.	(703) 435-2900
Joseph Arcos	OTS/AD/CHIB	755-2110
Joseph Merenda	OTS/AD	755-8043
James M. Ramey	Form Inst.	(212) 764-8841
S. John Byington	Rogers Hage & Hills	(202) 331-8700
Don Morgan	Cleary, Gottlieb, Steen & Hamilton	(202) 828-3097
Bob Sielken	Inst. of Statistics, Texas A&M	(713) 845-3141
Bill Fayerweather	DuPont	(302) 774-5780
Joel Bender	DuPont	(302) 366-5233
Kip Howlett	Georgia Pacific	(404) 491-6583
Ernest M. Dixon, MD	Tabershaw Assoc.	(301) 881-6920
John Bailar	OTS/EPA	426-2532
Ruth G. Bell	OGC/EPA	755-0794
Steve Atkinson	OGC/EPA	755-0870
Dick Griesmer	Oak Ridge National Lab	FTS 624-0213
Betty Anderson	OHEA/EPA	755-3968
Ed Klein	OTS	426-2451
John B. Ritch, Jr.	IAO/OTS	755-3852
Paul Milbauer	EPA/OA	755-0409
Edwin H. Clark, II	OPTS	755-0310
Robert G. Tardiff	NAS/NRC	389-6914
Jane Keller	OTS	755-6941
Dick Hill	OPTS	755-4871
Bill Smock	Formaldehyde Institute	(914) 725-1492
Gerald A. Hapka	DuPont	(302) 774-9466
Mary Martha McNamara	Rogers Hoge & Hills	331-8700
James Swenberg	CIIT	(919) 541-2070
Dr. Gibson	CIIT	(919) 541-2070
Lisa Barrera	EPA/DA	755-0418

FORMALDEHYDE Session
Environmental Protection Agency
August 14, 1981

NAME	ORGANIZATION	PHONE
Betty Anderson	EPA/OHEA	755-3968
Robert McGaughy	EPA/OHEA/CAG	755-3968
Edwin H. Clark, II	EPA/OPTS	755-0310
Chao W. Chen	EPA/OHEA/CAG	245-3040
Ed Klein	EPA/OTS/CCD	426-2451
Steve Atkinson	EPA/OGC	755-0870
Jim Nelson	EPA/OGC	755-0870
Terry Yosie	EPA/SAB	755-0263
Marilyn Stone	EPA/OTS	472-3433
Paul Milbauer	EPA/Administrator's Office	755-0409
Lisa Barrera	EPA/Deputy's Office	755-0418
Joseph Arcos	EPA/OPTS/AD	755-2110
Richard Dailey	EPA/OPTS/AD	755-4860
Robert L. Sielken, Jr.	Texas A&M University	(713)693-7135
E. John Byington	Rogers, Hoge & Hills	331-8700
James M. Ramey	Formaldehyde Institute	(212)764-8841
Donald L. Morgan	Cleary, Gottlieb, Steen & Hamilton	828-3097
Joel Bender	DuPont	no number
Julia Phillips	DuPont	(302)774-8284
Gerald A. Hapka	DuPont	(302)774-9466
Ernest M. Dixon, Md.	Tabershaw Associates	(301)881-6920
William E. Fayerweather	DuPont	(302)774-5780
Irwin Baumel	EPA/OTS/HERD	426-2535
Don R. Clay	EPA/OTS	755-8033
John A. Todhunter	EPA/OPTS/OAA	755-0310
John W. Hernandez	EPA/Deputy Administrator	755-2711
Joseph Merenda	EPA/OTS/AD	755-8043
David Gaylor	FDA/NCTR	542-4519
Gary F. Grindstaff	EPA/OPTS/HERD	755-6841
Kip Howlett	Georgia Pacific	(404)491-6583
Henry Heck	CIIT	(919)541-2070
Mary Martha McNamara	Rogers, Hoge & Hills	331-8700
Jane E. Keller	EPA/OTS	755-6841
John F. Murray	Formaldehyde Institute	(914)725-1492
Todd W. Thorslund	EPA/OHEA/CAG	755-3968

I would suggest in the future you might want to keep a transcript of the discussions. It is not a statutory requirement, but in terms of the questions that have been systematically raised by members of this committee and other committees in the Congress, I just think as part of the process, it would make it a great deal easier for you to answer questions as to whether there may or may not have been wrongdoing, meetings and so on and so forth, if you can show what happened.

I yield back to Mrs. Schneider.

Mrs. SCHNEIDER. Also to continue my line of questioning, I think I would like to share with you the fact that other subcommittees have heard from all of the leading Government epidemiologists that formaldehyde is a "probable human carcinogen."

Now, it appears to me unless you have representatives from NIOSH, which has recently issued a current intelligence brief on formaldehyde, which absolutely states that it is a probable human carcinogen, then I think that your research is only done halfway and I might recommend you be in communication with NIOSH as they have produced a great deal of scientific background information.

Since you have said there are no recommendations that came out of this meeting, I might also say I thank my colleague from Tennessee for slipping this to me and for the homework that he did, but this is a memorandum from Don Clay, to John Todhunter, which does develop some criteria for section 4(f) applicability.

I would also like to have the opportunity, Mr. Chairman, to allow Mr. Hernandez to have the opportunity to respond in writing.

Mr. SCHEUER. If there is no objection, I would rule that all members be entitled to submit questions in writing to the witnesses and we will hold the record open for another 10 days or 2 weeks for their answers.

Mrs. SCHNEIDER. As you know, GAO has recommended your Agency be given a very clear mandate to oversee and direct Federal efforts relating to indoor air pollution.

I am sure you are aware of the National Academy of Science report which concludes that the present quality of the indoor environment and how this quality may change are matters of immediate and great concern.

I will also tell you that I am sure all of my colleagues who sit on this committee with me share a great deal of frustration when we sit here day after day in hearings about research and technology development and find out how Japan is so far ahead of us, as well as other countries.

On a recent visit to Japan, I had the opportunity to discuss what the environmental priorities were of that particular country. Needless to say, these folks were talking about indoor air pollution but going beyond the talking stage into the acting phase and really coming up with tangible solutions as to how to address it.

I was just wondering what your reaction was to the National Academy of Science's report on indoor air pollution.

Mrs. GORSUCH. Let me say that our area and/or focus and our statutory mandate obviously are within the construct of the Clean Air Act which has standards based on ambient air quality, on indoor air quality.

As part of continuing research and development, however, we have not only funded interagency studies on indoor air pollution, but we are continuing through our assessment of overall exposure by humans to contaminants to develop information throughout our program on indoor air pollution.

Whether it has that flame, per se, in a line item, only if it is part of our ongoing duties under the national ambient air quality standards to assess what the overall exposure risks are.

Mrs. SCHNEIDER. I wonder if you could provide for the committee and for the record a detailed funding history of EPA's research program on indoor air pollution and also please document for this committee the plans for conducting future research on indoor air quality.

If you could please submit that to this committee at some point in the future, I would appreciate it.

[Response follows:]

Submit a detailed research and funding history of EPA's R&D program on indoor air pollution and also document the Agency's plans for conducting future research on indoor air quality.

Response: (Office of Radiation Programs)

Project Title	Year Funded	Resources ($000)
Evaluation of Methods for Measuring Indoor Radon and Decay Products (Butte Study)	1980	300
	1981	1,200
	1982	180
Effect of Indoor Air Circulation Systems on Radon Decay Product Concentration	1980	165
	1981	25
	1982	10
The Dynamics of Airborne Radon Decay Products	1980	170
	1981	10
Radon Emanation From and Diffusion Through Floors, Walls, Cement Slabs, and Transport Through Small Holes and Cracks in Buildings	1980	260
	1981	10
Study of Health Effects of Radon in Water	1980	195
	1981	10
	1982	10
The Effects of Home Ventilation Systems on Indoor Radon-Radon Daughter Levels	1976	50
A Preliminary Evaluation of the Control of Indoor Radon Daughter Levels in New Structures	1975	50
	1976	50

The Office of Radiation Programs has no plans to initiate further studies of indoor radon, its effects, or control and remedial techniques.

Question 25 (cont.)

(Office of Research and Development)

Project Title	Report Title	Report # (Date)	Year Funded	Resources ($K)
I. Indoor Air Pollution Project			1976-78	671*
General review of information and development of indoor-outdoor model.				
	Status of Indoor Air Pollution Research-1976	EPA 600/4-77-029 (May 1977)		
	Survey of Indoor Air Quality Health Criteria	EPA 600/7-78-027 (March 1978)		
	Indoor Air Pollution Model	Geomet EF-628 (Feb. 1978)		
	"Indoor Air Pollution in Residential Environments: Vol. I: Data Collection Analysis & Interpretation	EPA 600/7-78-229a (August 1978)		
	Vol. II: Field Monitoring Protocol--Episodic Pollutant Release Experiments and Numerical Analysis"	EPA 600/7-78-229b (August 1978)		
II. Characterization and Control of Indoor Air Pollutants			1981	200**
Evaluation of effectiveness of various technologies in reducing the level of pollutants in indoor air. Support of Interagency Research Group on Indoor Air Quality. Development of protocols for monitoring indoor air.				
	Workshop on Indoor Air Quality Research Needs	EPA 600/7-81-118 (April 1981)		
	Inventory of Current Indoor Air Quality-Related Research	EPA 600/7-81-118 (April 1981)		

Project Title	Fiscal Year	Resources ($K)
III. Characterization of Indoor Air Pollutants	1982	500

Support of Interagency Research Group on Indoor Air Quality. Monitoring study of indoor air pollutants, such as particulates, formaldehyde, polyaromatic hydrocarbons, solvents, pesticides, radon, carbon monoxide, and nitrogen dioxide.

*About 200K additional supplied by Housing and Urban Development (HUD)
**This amount is approximately $400K less than originally planned. These resources were proposed for a FY'81 rescission, which was not granted. For the rescission amounts returned, OMB and the Agency are working out the return for various programs; therefore, some of these monies may be recaptured.

Mrs. SCHNEIDER. A final point: I found it rather bizarre to note and I will share this information with my colleagues, that it is interesting there are two cities in Montana where the radon levels indoors are so high in many of the homes that the Department of Housing and Urban Development now requires inspection of these homes in order to detect the radon levels before they guarantee a mortgage.

So I think this will tell you a little bit about the critical importantance of this particular issue.

Since we do have a vote, I would be interested to know if any of your studies attempt to expose radon as one of the major indoor air pollutants?

[Question and response follow:]

Question. What studies have EPA conducted on indoor radon and what were their conclusions on radon as an indoor air pollutant?

Answer. Evaluation of Indoor Air Circulation Systems on Radon Decay Product Concentration—study is still in progress; preliminary findings indicate a variety of air cleaning systems can be effective in controlling airborne radon decay products.

Dynamics of Airborne Radon Decay Products—this study provided additional information on how radon decay products attach themselves to dust particles and surfaces.

Radon Emanation From and Diffusion Through Floors, Walls, Cement Slabs, and Transport Through Small Holes and Cracks in Buildings—this study concluded that building materials are not a major contributor to indoor radon. It is feasible to develop standard procedures for determining radon contributions from specific building materials.

Effects of Building Materials on Population Dose Equivalents—this was a preliminary investigation of the subject which resulted in no significant conclusions.

Effects of Home Ventilation Systems on Indoor Radon-Radon Daughter Levels—in this study of limited scope, radon, radon progeny and working levels were found to decrease with the increase in house ventilation rate.

Indoor Radon Exposure Due to Radium-226 in Florida Phosphate Lands—this surveillance study concluded that many individuals residing in central Florida are exposed to undesirable levels of radiation as a result of the presence of elevated concentrations of radium-226 and other radionuclides in phosphate ores and mining wastes in the area.

Study of Health Effects of Radon in Water—the final report from this study has not yet been received.

These individual studies formed a major part of the overall Office of Radiation Programs (ORP) effort to assess the problem of indoor radon. General conclusions which can be drawn at this time from conduct of this program are as follows: elevated radon levels can be found under certain natural geologic conditions; the primary source of indoor radon is soil and bedrock which is beneath surrounding building foundations; radon in water can also be a significant source of indoor exposure; in certain cases, building materials may also contribute to the indoor radon problem.

Mrs. GORSUCH. This goes back to Mr. Carney's observation about honing through to our statutory mandates, which I have heavily emphasized to all of my managers as being our No. 1 top priority.

There is no construct under the current law for regulation of indoor air pollutants by EPA. Our interest stems from our charge, our statutory duty under the Clean Air Act for national ambient air quality standards and in that regard, we have had an ongoing effort to measure overall exposure.

I think it is important for this committee to hear directly from me that, as you all well know, there is no statutory basis for regulatory activity on indoor air pollution.

Mrs. SCHNEIDER. I do recognize that, Mrs. Gorsuch, but as you admitted earlier, it is the function of the Environmental Protection Agency to do the research. This is a research-oriented committee.

Unless you do the research and provide us with the data, we will not be in a position to develop the policy. It is really incumbent upon you to provide us with the research that we may review it and come up with the statutory design that you would then be in a position to enforce.

Mrs. GORSUCH. I didn't want there to be any lack of understanding. We will continue to do the ongoing assessment of overall exposures for human health and that does include indoor air pollution and exposures.

I believe we were responsible for the Montana work that you cited.

Mrs. SCHNEIDER. This subcommittee is getting frustrated in how the United States seems to be falling behind in so many different research areas and it is important that we just not do it because we have got to do it or because it is a nice idea, but we recognize this is one of the critical environmental concerns of the future and I am sure that your agency would not be in a situation that it is right now if we practiced more preventive medicine rather than efforts to enforce and clean up and both industry and environmentalists and everybody would be happy, particularly the people who had to administrate these programs.

Hopefully we can move in the direction of getting more bang for the buck, but also recognizing the important role and the edge the United States must maintain in research.

Thank you, Mr. Chairman.

Mr. SCHEUER. I thank my colleague. I would add, I was also in Japan during the August recess on a conference on productivity and I can say, on the one hand, not only are they doing a far better job than we are doing in scrubbers and all kinds of environmental technology, and enjoying the benefits of a far less degraded society from environmental pollution and long-term health effects degradation, but they are doing it totally consistent with increases in their own productivity, in all areas. They are far more productive than we are and if we don't get our act together, they are going to wipe us out of global markets in the next 5 to 10 years. It is simply a canard that they are doing it at the cost of protecting their environment and protecting their health.

They are way ahead of us. Their competitiveness in global markets is totally consistent with doing an outstandingly effective job in protecting health and environment.

I yield to Congressman Jim Blanchard of Michigan.

Mrs. GORSUCH. I appreciate your wisdom, your remarks and observations. We can proceed with economic and environmental protection enhancement. One need not necessarily preclude one or the other.

Mr. BLANCHARD. One of the reasons they are out in front in so many areas is because they make long-term investments in the future instead of worrying about short-term accounting gains.

As you can tell, most of us are not happy with the direction of EPA these days. It may or may not be your fault, but it has to do with the budget.

My concern—and I am not happy, either—is the direction of the Great Lakes water quality program. Essentially, as I understand it, EPA is abolishing those programs and I am wondering why.

In addition, I am wondering why the Large Lake Laboratory in Grosse Ile, Mich., is being closed, because it is the one facility that looks into the problems of the Great Lakes, helps monitor the Great Lakes water quality agreement with Canada, and is trying to look into the effect of toxics upon human health in the Great Lakes.

Mrs. GORSUCH. If I could, Congressman, I would like to refer that answer to Dr. Jovanovich and Dr. Hernandez.

Mr. JOVANOVICH. We still have a Great Lakes research program.

Mr. BLANCHARD. Where?

Mr. JOVANOVICH. To be managed out of our Duluth Research Laboratory.

Mr. BLANCHARD. They have no Great Lakes program up there.

Mr. JOVANOVICH. At the Grosse Ile laboratory now, we have a Great Lakes program which was to be transferred to Duluth with significant savings in cost to run it out of our Duluth laboratory.

I believe Congress is contemplating keeping the Grosse Ile facility open and we can continue research there.

Mr. BLANCHARD. Duluth has not been doing any Great Lakes research work. You are anticipating they will do the research that is now in Grosse Ile?

Mr. JOVANOVICH. A good portion of the staff from Grosse Ile lab would be moved to Duluth to continue the research from there. It gives us a cost savings on the facility at Grosse Ile and still gives us program continuity.

Mr. BLANCHARD. How many people are you talking about?

Mr. JOVANOVICH. I believe of the seven, four were being moved to Duluth and two to Narragansett and one was staying behind.

Mr. BLANCHARD. How about all the research people—there are some 60-odd research people from the University of Michigan and all over, where they help coordinate and where we get tremendous mileage that you will not get in Duluth, which is actually 800 miles away.

Mr. JOVANOVICH. I don't believe it is going to cause a problem with your extramural contract.

Mr. BLANCHARD. I am really confused, now. Do you believe that the Large Lake Laboratory is useful in helping monitor our water quality agreement with Canada.

Mr. JOVANOVICH. I believe we are still continuing to monitor water quality.

Mr. BLANCHARD. In the Great Lakes with Canada?

Mr. JOVANOVICH. Yes. And meeting our agreement with Canada.

Mr. BLANCHARD. Do you now believe that that laboratory is instrumental in doing it?

Mr. JOVANOVICH. It has been heavily involved in that activity in the past.

Mr. BLANCHARD. And you are hoping those functions will continue in Duluth.

Mr. JOVANOVICH. With the scientific personnel stationed in Duluth.

Mr. BLANCHARD. Let me point out a problem.

Mrs. GORSUCH. Mr. Blanchard, I am trying to understand where we are in this current budget. As I currently understand, the

Grosse Ile site will continue to be funded. The original proposal was to move some of that personnel to the Duluth laboratory.

I am trying to interpret, here, and I would welcome any correction by any who have familiarity with the details, but what you are talking about was an extramural contract operation for continuing monitoring by other than EPA.

Mr. BLANCHARD. That's correct.

What is your intention with that lab? It is open, now, and we are attempting to keep it open, both here and in the Appropriations Committee.

Mr. JOVANOVICH. If we are asked to keep it open, we will keep it open and run the program through there.

Mr. BLANCHARD. Well, I am asking you to keep it open. I think that would be a nice thing. Great Lakes happens to be 95 percent of the surface freshwater of the United States of America.

One out of every 10 people drink that water and I can't, for the life of me, think of anything you could do that would be more protective of the environment than worry about the Great Lakes.

Mr. JOVANOVICH. We still have a Great Lakes research program. Our main technical participants in that program have always been in the Duluth laboratory.

Mr. BLANCHARD. But they have not directed research toward the Great Lakes. It is also 800 miles away from the International Joint Commission. Grosse Ile is 15 miles away from the International Commission, which is our Commission with Canada to monitor our water quality agreement with your neighbor and ally, the Nation of Canada.

How much are you going to save by closing down that facility?

Mr. JOVANOVICH. I believe the figure is around $300,000 a year.

Mr. BLANCHARD. $300,000 to save so that you can hope maybe in Duluth that some people who may or may not move, you are going to protect 95 percent of the surface freshwater of the United States, and our relationship with Canada?

Well, look. I made my point. We are very concerned about it. You cannot kick this problem back to the States because there are eight States involved.

It is a Federal responsibility. Our relationship with Canada is deeply affected. One out of ten people drink that water.

It is an important world resource, not just a national resource.

I know you are under intense pressure to cut the budget. For God's sake, if you are going to spend $300 million or $200 million—and it should be more, on research, please get your priority straight and don't expect the State or private industry to monitor this important human resource.

I look forward to working with you on it. We will insist, I hope in this committee, to keep that funding open and we will resent attempts to lobby through the back door to shut it down.

And I am sure Congressman Dingell, who happens to represent Trenton, Mich., where that Grosse Ile laboratory is near, feels the same way.

Thank you.

Mr. SCHEUER. Congressman Al Gore.

Mr. GORE. Thank you, Mr. Chairman. This is an unusual hearing. I would inform our witness, our colleague from Michigan is not like me. It takes a lot to get him mad on these things.

In the years I have been here, I don't think I have seen him express himself quite as strongly and I think it is indicative of the feeling of frustration that a lot of people in the Congress have with what is going on at EPA.

I have a number of areas that I would like to explore. I was going to devote a lot of time to formaldehyde, but my colleagues covered that pretty well.

There were a couple of loose ends I wanted to address quickly.

First of all, Dr. Hernandez, you said there was no ongoing rulemaking. Technically speaking, the Toxic Substances Control Act requires you to publish something in the Federal Register if you find that a substance is a 4(f) substance and presents a significant widespread risk, is that correct?

Mr. HERNANDEZ. That is my understanding.

Mr. GORE. If you found formaldehyde to be a 4(f) substance, then you would have to begin that formal procedure, is that correct?

Mr. HERNANDEZ. That's correct.

Mrs. GORSUCH. Congressman, that decision is specifically given by statute to the Administrator and so it would be my determination. I have not made any determination to date.

Mr. GORE. I understand that. But if the decision had been made that formaldehyde was a 4(f) substance, then you would have been right in this formal procedure, so this was a prerulemaking procedure.

What was underway here was an effort by the Formaldehyde Institute to do what they could to avoid having formaldehyde classified as a 4(f) substance and how EPA responded to the industry's desire without characterizing that at this point, formed the substance of this series of meetings, is that correct?

Mr. HERNANDEZ. Let me respond a little bit in depth to that one, Congressman Gore. I really didn't view it as any kind of a preregulatory process.

Maybe that is some of my naivete, being an engineer rather than being a lawyer, but I viewed it as an effort on my part to find out what the scientific basis—what the scientific basis of the staff package was with respect to industry's view of this and I knew no better way than to get these folks together to sit down and discuss those limited issues.

Mr. GORE. Why didn't you ask Arthur Upton, for example, or some of the other experts who have testified before the Congress on this matter, to offer their views?

If you were really trying to evaluate the scientific work of your staff, Why did you only ask for the industry's input on it?

Mr. HERNANDEZ. I didn't ask only for theirs. This meeting was asked for by the industry.

Mr. GORE. And there was no public notice of it, is that correct?

Mr. HERNANDEZ. No, sir.

Let me go on and answer about the other people. We did ask the people who did the animal testing to come and they really made a significant contribution to the question. They really did.

I think their long-term involvement in all three of those meetings—though we only anticipate doing it once when we got started—really was a significant contribution.

Having others there offered some credibility. We did have those people and I think of the total, there were three or four different individuals because each time they brought somebody else.

Then there was also the person who is head of the Federal Panel on Formaldehyde, who was invited to come and—that is Dick Greisemer, and also the National Academy of Science produced a report on formaldehyde and we asked Bob Tardiff to come.

We did have some input by people who were currently involved. I personally didn't know Dr. Upton and don't know him yet. He may have been an appropriate person to have asked, had I thought of that.

Mr. GORE. There were legal consequences which would have flowed from a determination that it was a 4(f) substance. After the official meeting with the Formaldehyde Institute and the others who were present, a memo was directed in the agency recommending that formaldehyde should not be designated by the administrator as subject to TSCA 4(f), is that correct?

Mr. HERNANDEZ. Yes, sir. That package is sitting on my desk. I reviewed it in part. It is a long and technical issue. I read the preamble.

There is a statement in back of it which says, "Here are the pros and cons of this" and so on. I have read that and have it under consideration, at this time.

Mr. GORE. Was Mr. Todhunter present during the meetings with the Formaldehyde Institute?

Mr. HERNANDEZ. I would have to check the list. I think he may have been there for one, possibly two.

Mr. GORE. You are pretty sure that he was there for one, possibly two?

Mr. HERNANDEZ. At least one, yes.

Mr. GORE. Maybe all of them?

Mr. HERNANDEZ. No—the first one, I think, occurred before Dr. Todhunter came, but I would say two off the top.

Mr. GORE. Now, the memo recommending that formaldehyde not be designated as a 4(f) substance was addressed to Mr. Todhunter. Why would that be?

Mr. HERNANDEZ. Dr. Todhunter, as you know, is the designee for that office and the acting person is Mr. Toby Clark, Dr. Clark.

And I believe that package was a staff-derived package from Don Clay, to Todhunter.

Mr. GORE. Why to Mr. Todhunter?

Mr. HERNANDEZ. To tell tou the truth, I don't know why that process specifically was followed.

Mr. GORE. Well, the people in the agency clearly are under the impression that he is in the chain of command and making the decisions in this and other matters.

Isn't that a fair conclusion, Mr. Hernandez?

Mrs. GORSUCH. Congressman, I think that is very clear. He may be nominated by the President, he has been in hearings by the Senate prior to their vote on confirmation and I think it is clear

that he should be informed on an ongoing basis of developments within his projected area of responsibility.

I specifically want to state for the record that he has not been in any decisionmaking mode in the agency other than as a consultant to me during this interim process.

Mr. GORE. I will explore that in a moment with respect to another substance, because the evidence indicates that he has been intimately involved in changing the EPA's view of the risks associated with a variety of substances and I would like to explore that when we come back from the vote.

Mr. SCHEUER. We will adjourn for 12 minutes and Congressman Gore will then proceed.

[Recess.]

Mr. SCHEUER. Congressman Gore.

Mr. GORE. Thank you, Mr. Chairman.

I would like to begin by expressing my thanks to EPA for responding to the request that I made for the documents relating to the decision on formaldehyde. I commend those in the agency who were comfortable enough to be forthcoming in that request. That is as it should be and I appreciate it. I want to say that for the record.

I also want to reflect on the record my own judgment that this is not an idle decision on formaldehyde by any means. It is a difficult decision that has to be made carefully. It is the process that is important and it is the process about which I have been asking questions, and I intend to pursue the issue of formaldehyde because it is part of an overall picture of how a single industry has chosen to approach this administration in trying to get favored treatment for the substance it produces even if that means pushing the public interest aside in the process.

Now, this happened over at OSHA, and my subcommittee had hearings on the process at OSHA, and this in some ways—I don't want to overstate that; the similarity I am drawing is a very precise one—the lobbyist for the industry, Mr. Byington, and the Formaldehyde Institute, chose a rather unorthodox procedure to try to influence the decisionmaking in the agency and have the decision made in a way that disadvantaged those representatives of public interest groups or other groups principally concerned with the health consequences of this substance. The procedure that was set up, I think, fits that pattern and really, I don't think an industry ought to be allowed to do that.

Now, I take it the decision is still up in the air. One of the documents we got was a memo from Mr. Byington to you, Mr. Hernandez, and it says:

"Memo From S. John Byington to the Honorable John Hernandez, Subject: Application of formaldehyde to OGC's primer on TSCA section 4(f)," and he says on page 4, "With respect to formaldehyde there is little certainty of the existence of the carcinogenic risk to human health.

"As pointed out above, the only data on chronic toxicity are primary and relate only to animal studies."

Do you agree with that statement, or are you still making up your mind on that?

Mr. HERNANDEZ. I am very, very careful in what I say about animal tests and chemicals and, very specifically, formaldehyde. I don't want to go into a long answer on that particular one.

What was the date on that one, Congressman Gore?

Mr. GORE. May 26.

Mr. HERNANDEZ. I can't remember the exact date, but I think that we met with the Formaldehyde Institute people the next day, or he may have delivered that——

Mr. GORE. You met with him on the 27th.

Mr. HERNANDEZ. That was when they asked if they could meet with the staff people who drafted our package to discuss the various issues like that one that you raised.

Mr. GORE. That is when they asked for what they referred to as the science court?

Mr. HERNANDEZ. I think that is just a word somebody has coined. I think the first place that came out was in one of the environmental presses. It is a catchy name, but I wouldn't want to dignify what we did as any kind of a science court.

Mr. GORE. I wouldn't either.

Mr. HERNANDEZ. People pick up on it as a legalistic process. It was far from any kind of a legalistic process.

Mr. GORE. I hope you make the right decision and I hope you come up with a better procedure for doing it, and I assure you we will be interested in following this.

Now, as to Mr. Todhunter, I don't want to reinforce the fiction that somebody who is a designee awaiting confirmation has no role to play in an agency. We all know in the real world that occurs, but by the same token, the EPA's desire that he not testify I think perpetuates that fiction.

I have a whole stack of memos which demonstrate that it is indeed a fiction. I won't belabor the point.

Earlier I referred to the memo on formaldehyde addressed to Mr. Todhunter from Don Clay. We talked about why on earth he would be receiving that memo.

Here is another memorandum dated July 28. Subject: Appointment of Don Clay as the Acting Office Director for the Office of Toxic Substances, from Dr. John Todhunter.

"I am pleased to announce the appointment of Don Clay," et cetera, et cetera, et cetera.

I won't go through all of these, but typical content will be Mr. Todhunter telling the staff, "In short, the response is unsatisfactory on these counts and must be rectified. I expect by week's end that the following actions will have been taken * * *."

So it is clear he is in a decisionmaking capacity and I don't want to perpetuate that fiction unless you all do, because I have some questions I would like to go into concerning some of this action.

Mr. SCHEUER. I think we ought to hear Mrs. Gorsuch because she told us he was not in a decisionmaking capacity and his status there was simply advisory to her during this interim period. Now, there is a great inconsistency here.

Mrs. GORSUCH. I appreciate the opportunity to respond, Mr. Chairman. I do feel I need to clarify my statement.

He is specifically not in a decisionmaking capacity for which he stands for confirmation. That is subject to Senate confirmation.

That is Acting Administrator for Toxic Substances. To say he has made no decision since he came on board as a consultant to me in early, I believe it was July, would indeed be a fiction and one I do not want to leave this committee with.

Dr. Todhunter has under his direction as a consultant to me afforded me the basis for several decisions in terms of his status of consultant. Indeed, he has been very helpful in managing the agency in the interim. He has not exercised the official prerogatives or the position for which he stands for Senate confirmation, and that distinction should be made.

Mr. SCHEUER. Well, now, when he cracked the whip and got out that rather sharply edged directive that is scarcely a glove over a mailed fist, that he expected action to be taken before week's end, under what authority did he function?

Mrs. GORSUCH. As consultant to the Administrator, if I am referring to the same memorandum.

Mr. SCHEUER. I refer to the one Mr. Gore just read.

Mr. GORE. It is signed "Assistant Administrator-Designate."

I don't want to pursue this, Mr. Chairman. There are a couple of avenues you can move to.

One is, I think it buttresses our desire to talk with this gentleman who is making decisions in some capacity——

Mr. SCHEUER. Well, he is making decisions and I think it ought to be clear, as Assistant Commissioner-designate and not as a consultant to Mrs. Gorsuch. Consultants don't write letters like that. I have had some experience in the world of business. When consultants consult, they make recommendations to the brass, the people with operating responsibility, and then the brass gets out those kinds of letters.

Mrs. GORSUCH. That is true. I have made this clear to my staff, and this is one instance of it, where I feel our response has to be done in a very timely fashion, and as I was about to say, if my recollection of that particular memorandum is correct, it was, No. 1, 4 months is too long a time to elapse. That is under general directions from me, where I feel we need our response time to be improved in every direction.

Mr. SCHEUER. I appreciate that, but I think the record is perfectly clear that he was trying to afford a short response time and was getting out these directives over the signature as Assistant Administrator-designate. Nothing could be clearer than that; that he was not functioning in a consultative capacity.

I think I understand the English language, and I think it is perfectly clear he was functioning as a line officer-designate.

Mr. CARNEY. Will the gentleman yield?

Mr. GORE. I am glad to yield. I don't want to pursue this particular point, but I will be glad to yield.

Mr. CARNEY. I am not so sure if we are trying to rebuild the wheel here over and over again, and I don't know that it is going to be productive. I would suspect it is the chairman's intention to have Mr. Todhunter become a witness immediately upon his becoming confirmed, if that confirmation does take place.

I don't know if we are going to reach any productive conclusion here. I would not want to see what we have established on the

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record be blurred by pursuing something that is not going to help the overall good.

Mr. SCHEUER. Congressman, you just heard Congressman Gore say he was finished with this matter and that the record speaks for itself. I suggest we pass on to other matters.

We do expect to have Dr. Todhunter here immediately when he is confirmed, but we do not foreclose ourselves from asking him up here before he is confirmed since it is perfectly clear he has been acting in a decisionmaking capacity as Assistant Administrator-designate.

Mr. CARNEY. On that, if I may, could I be informed what is your best guess as to when we think he might be confirmed?

Mr. GORE. Or rejected.

Mrs. GORSUCH. I don't know when it will have a floor vote in the Senate. He has gone through the committee hearing process and I think questions have been submitted in writing for his response.

Mr. CARNEY. So we can probably figure about a 3-week time frame, considering keeping the subcommittee books open for a required time, then the full committee, and then the full Senate would react on it.

Mrs. GORSUCH. I have just been informed the first week of November would be a reasonable expectation.

Mr. CARNEY. That is pretty close.

Mr. Chairman, if I may make a suggestion, I would suggest we have Mr. Todhunter appear before the committee immediately after his confirmation. I think confirmation is a responsibility of the other body and I wouldn't want to get involved in anything to do with that process right now. I don't think it is productive.

I yield back the balance of my time.

Mr. SCHEUER. I want the record to show also that the Senate has advised us that they have absolutely no reservations whatsoever about Dr. Todhunter appearing here before the official confirmation took place.

Mr. CARNEY. I wouldn't want the record to reflect that I am happy about what has happened because I am not, but in 3 or 4 weeks we will have the gentleman here and can ask him the important questions.

Mr. GORE. The Senate subcommittee has indicated a keen interest in this proceeding today, and in what evidence is established on the record here today.

Regardless of what capacity he was acting in, I would like to ask you, Mrs. Gorsuch, a few questions about actions taken that affect the scientific review process. We have had some considerable questions about the scientific review process at EPA today.

I was reading your press release where you found a lack of integrity, or something—I don't have it right here, but it was criticizing the process as it now operates.

I want to ask you about the specific case of ethylene dibromide. Do you recall ethylene dibromide?

Mrs. GORSUCH. Yes, I do, Congressman.

I would like to state for the record, Mr. Chairman, the distinction between being an Assistant Administrator-designate and a consultant, they are not mutually exclusive titles. I believe Mr. Todhunter was nominated by the President at the time that the

characterization of Assistant Administrator-designate was used. I cannot be certain of that. I will be happy to check it, but he is employed by the Agency as a consultant and I don't use those two mutual capacities as being mutually exclusive.

Now, responding to your question, I do have a recollection, yes.

Mr. GORE. There was a controversy that attracted some attention. Before I get into it, I would also like to commend Mr. Todhunter on one thing. When a scientist at EPA spoke out publicly in opposition to his assessment of the risk associated with ethylene dibromide, Mr. Todhunter said he is a scientist and is entitled to speak his mind, and I think that is an admirable attitude, one that was eventually adopted at OSHA after a controversy developed there, and I hope it is a principle that the administration stands by because even though it creates controversies such as the one I am about to explore, it is in the public interest.

With respect to ethylene dibromide, it is a fumigant used on citrus that has become of some concern. It is not Malathion. It is quite different from Malathion, but my understanding is in late July and early August of this year EPA became concerned about the risks associated with using this particular pesticide in much larger quantities over a shorter period of time than usual.

Mr. Hernandez, am I correct on that?

Mr. HERNANDEZ. I am not sure about the larger quantities than in the past. I don't know about that.

Mr. GORE. The State of California had a proposal to use larger quantities of ethylene dibromide as a direct result of the Medfly incident in California and EPA began to express some concern about what the effects of that might be.

Mr. HERNANDEZ. I think the way we got into that, people in California were looking for alternatives, knowing that their Malathion spraying program started late and anticipating they would find some Mediterranean fruit flies in the crop, a good deal of which is exported, so there was some concern and people asked us, "Is this stuff safe?"

Mr. GORE. You were trying to prepare yourselves for those questions?

Mr. HERNANDEZ. Yes.

In terms of reviewing what people were proposing to do there, we have a history, because this is a registered material right now used commonly in Florida and Texas, as this would be an additional use like those that are ongoing in other parts of the country. They don't have a history of using this in California because they haven't had that type of problem in the past.

Mr. GORE. You attended a meeting at the Executive Office of the President in early August to discuss this issue?

Mr. HERNANDEZ. That is correct.

Mr. GORE. Mr. Todhunter was there?

Mr. HERNANDEZ. I asked him to attend.

Mr. GORE. Now, you had information prepared by the Science Advisory Panel, SAP. I want to show you a memorandum that was sent by John Todhunter to Mr. Joe Panetta in your Office of Pesticides. Could you identify Joe Panetta?

Mr. HERNANDEZ. I believe he is the individual who was in charge of the rebuttable presumption against registration process. He is a

person who is familiar with what was going on and, incidentally, he was with us that day at the Executive Office Building.

Mr. GORE. Now, he has been interviewed by the staff and informed of the statute concerning such interviews and has confirmed that there is a memo to him from Mr. Todhunter.

The staff has verified its authenticity by interviewing other members in EPA, also, subject to the same constraints, and Mr. Mike Tomlin, Associate Director of the Office of Pesticides, and Mr. Edwin Johnson, Office Director of the Office of Pesticides.

Now in this memorandum Mr. Todhunter appears to be directing Mr. Panetta to change the agency's view of the risk presented by ethylene dibromide from a rate of 10 to the minus 4 to 10 to the minus 6. Put in layman's language, and this was to be used as the basis for a public statement on ethylene dibromide to be circulated particularly in California to those who were concerned about these matters, it was translated into layman's language into an example relating to the risk associated with cigarette smoking.

The Agency's conclusion, EPA's conclusion, based on the scientific review panel's work, was that it was comparable to the risks associated with smoking 70 cigarettes a day for an individual's entire lifetime.

Mr. Todhunter instructed them to change the risk assessment so that it would reflect a risk comparable to smoking one cigarette in an entire lifetime.

Now, that seems to be an unusual interference in the scientific review process by this designee or consultant, or in whatever capacity he was acting, and I am wondering if you have any basis upon which to abate the reduction of risk for this substance from 10 to the minus 4 to 10 to the minus 6.

Mr. HERNANDEZ. Trying to read this in Todhunter's scrawl is difficult.

Mr. GORE. Let me read it for you.

Paragraph Number 2, their high risk estimates we have of approximately 10 to the minus 4 for consumers of fruit with approximately 1 part per million of ethylene dibromide present are lifetime risks. This use presents a 1-year exposure maximum as opposed to lifetime exposure. Risk falls exponentially as the exposure period is decreased, and comparing risks from a 1-year exposure to a lifetime exposure suggests that any risk would be much smaller than 10 to the minus 6, which is a level of risk which can be safely said to be of no concern.

And then the note which is right to the side of that says, "For Byron." Now, Byron Nelson is head of Public Affairs; right?

Mr. HERNANDEZ. Yes.

Mr. GORE. He was the person preparing the public statement to be based upon this risk assessment.

"For Byron. Normal cancer risk is 10 to the minus 6. This is 1,000 times less than the risk of smoking 1 cigarette in your life."

Now, we also have copies of the public statements related to ethylene dibromide, one of which was prepared by the EPA staff, and the second of which was redone with the assistance and at the instruction of Mr. Todhunter.

The first statement, which was not circulated to the public, accurately reflected the 10 to the minus 4 risk that had been established in a long scientific review process. The second version, reviewed and changed by Mr. Todhunter, that was actually distribut-

ed to the public assured the public, falsely in my opinion, that the risk was only comparable to that which one would incur smoking one cigarette in an entire lifetime.

Now, if this is an example of improvement in the scientific review process, then I don't think we are moving in the right direction and I would afford you an opportunity to comment.

Mrs. GORSUCH. I think the document does speak for itself. It says that data which we have is 1-year exposure as opposed to lifetime. If you put in a lifetime factor, the figures do indeed change, both of which can be used to put a risk into perspective for the public.

The fact that it was done on a lifetime basis rather than a 1-year simply does have to change those figures.

Mr. GORE. The fact of the matter is that the EPA staff, taking that into account, still says that the risk was 10 to the minus 4.

Now, the point is, you went through a lengthy formal procedure to arrive at the risk to the public of this pesticide.

Mr. SCHEUER. Did that process include peer review?

Mr. GORE. Yes, it did. It was a rather lengthy process. We have a lengthy document that shows the entire process and how they arrived at the figure of 10 to the minus 4.

Now we have this fellow coming in and, on his own motion, after meeting over at the White House, in the midst of this developing political controversy in California, comes back and writes a memorandum to a low-ranking official in EPA directing that person to change the risk assessment that the scientific review panel had spent a long period of time arriving at, in a handwritten memo from Todhunter to Joe Panetta, and with the copy and other notes to the press officer.

He is saying, in effect: "Don't tell the public what our scientific review process has established about the risks they are facing with this pesticide, and don't mention the risk to the applicators"—which is a whole other subject. Instead, let's tell the public what I, Todhunter, think about it, and let's change the entire Agency's statements to the public about the scientific risks involved.

The result is a misleading of the public.

Mr. HERNANDEZ. Mr. Chairman, if I could answer that a little bit, because I was involved in a part of that, I don't characterize what he wrote here as anything other than a consultant telling people that he thinks that we—for the 1-year risk, that we should reevaluate this in a different way.

I have with me one of the biostatisticians who did the work on this, and rather than characterize this as being sort of an ad hoc kind of review, I would like to have her testify, and she would identify herself for you and I think she would be glad to come forward and give you that information on how it was done.

Mr. GORE. We have the two statements that were prepared. The first statement prepared by the EPA staff says, and I quote—this was the one prepared by the EPA staff for presentation to the public—

> The agency's recommendations are aimed at reducing the risk to 5 in 100,000, a level comparable to the lifetime risk of an individual developing cancer from exposure to 50 chest X-rays taken in a good hospital, or the lifetime risk of cancer to an indiviudal who smoked 70 cigarettes.

Mr. SCHEUER. Seventy cigarettes over what time frame?

Mr. GORE. It doesn't say here that would be a lifetime, but it references a publication.

Mr. SCHEUER. Is it 70 cigarettes a day, a week, a month, a year, or a lifetime?

Mr. GORE. This is subject to interpretation of 70 over a lifetime. I originally said 70 per day. I was in error.

Mr. SCHEUER. Seventy cigarettes over a lifetime is a minimal risk.

Mr. GORE. The Todhunter memo reduces that to 1 cigarette in a lifetime, or a 70-fold reduction.

Again, as with formaldehyde, I am not saying that the decision is an easy one, and EPA has the authority to say that under existing statutes, that the benefits outweigh the risks in this specific case, but they did not choose to take that route. Instead, the agency chose to change the risk assessment.

The revised version, after Mr. Todhunter changed it, was in recalculating the probable risk from the 1-year exposure expected to result from fumigation against the Medfly, the agency staff started with a risk level appropriate to 70-year continuous lifetime exposure.

In preliminary calculations, the staff used a linear correction for exposure time. This is an incorrect procedure, and there is no basis for saying that, first of all. To correct for time effects, there are several ways of treating the problem mathematically, and he goes on to give the impression that the way the agency made the original determination was wrong and there is no scientific basis for making that determination.

If you think the benefits outweigh the risks, fine. Say that. That is OK. But for Mr. Todhunter to come in and interfere in the scientific process and say, "Change the risk assessment," in a handwritten memo to the official making the risk assessment, is an unwarranted interference in the scientific review process, in my judgment.

Mr. HERNANDEZ. I think what the staff was endeavoring to do was to come up with a statement that people can understand about the risk.

Now, I believe in the time sequence—I don't know what the date of this particular memo was at all, but you have to establish when he wrote the handwritten part that you are bringing to issue, when the staff wrote theirs, and there is a valid, scientific interpretation of controversy whether or not this thing falls off exponentially, and if so, at what rate, and so on. Overall, it may not make any difference.

Mr. CARNEY. Mr. Chairman, we are under the 5-minute rule and I am somewhat concerned. The gentleman from Tennessee has used his time and I would like some time to express my concerns.

Mr. GORE. I will conclude in 30 seconds, Mr. Chairman.

Mr. SCHEUER. Congressman Gore, if you will conclude this round in 30 seconds we will have another round. We will then refer to Congressman Carney.

Mr. GORE. Let me conclude this round by saying, again, that the specific judgment made on whether or not the benefits outweigh the risks is not the issue. The issue is the scientific review process.

We have heard from your presentation that you hope to improve that scientific review process. We had a process that was in place. It was changed unilaterally by one individual operating in an ad hoc fashion, not confirmed yet, directing the person making the assessment to change it.

The significance of it tends to undermine the claims that what you are doing over there is going to result in a superior scientific review process. If you are willing to put up with this, then the scientific review process is going to suffer.

Mrs. GORSUCH. Mr. Chairman, apparently we have an employee here who can address the specific issues of how this particular item was assessed and the review process that it went through. I don't know the specifics. I am not in a position to comment on Congressman Gore's characterization of events at EPA, but if we do have that person here, I would hope she would be allowed to testify.

Mr. CARNEY. I would like to say this: We have a gentleman who is going before the Senate. It is the Senate's responsibility to determine whether this man will be confirmed or not confirmed. The gentleman is not even here. I cannot even establish from a point of evidence that he wrote this memo, and I, at this point would have to say that I think this line of questioning is out of order when I consider that he is being considered by the Senate.

First, it is not our responsibility to give advice and consent on Presidential appointments.

Two, the gentleman is not here to defend himself.

Three, I am not so sure we are not in violation of utilizing proper rules of evidence, and I have some concern about that.

Mr. GORE. Will the gentleman yield?

Mr. SCHEUER. Let me say first of all the gentleman is not on trial here. We are performing our oversight responsibilities, Congressman, and this is apparently a matter of some concern to a member of the full Science Committee.

He is not on trial. We are not subject to the rules of evidence.

No. 2, let me say he was invited here and if he is not here that is due to the decision, rightfully or wrongly, of Administrator Gorsuch and the administration.

No. 3, it is not in dispute that this is his memorandum, and I think we are in absolutely proper pursuit of our oversight responsibilities. He could have been here if he had wanted. He knew perfectly well what was contemplated being asked. Nobody is trying him. I think this is a perfectly clear prosecution of our oversight responsibilities. I didn't say "persecution"; I said "prosecution."

Mr. CARNEY. Mr. Chairman——

Mr. SCHEUER. I am going to rule that Congressman Gore has completed his round of questioning. The young lady will be invited to testify after Mr. Carney has asked any questions he wants to. I hereby yield to Mr. Carney.

Mr. CARNEY. Again, I can only say emphatically I am somewhat concerned about the procedure, particularly because this gentleman is to go before a Senate committee which has the responsibility to give advice and consent.

Mr. SCHEUER. I would like to address that question.

We are pursuing our oversight responsibilities. We do not presume to advise and consent to anything. That is not part of our ju-

risdiction. Our jurisdiction is oversight. It is really a proper oversight item.

Mr. CARNEY. I appreciate the ruling of the Chair and I would like to inform the Chair we cannot continue to conduct this hearing unless a minority member is here, and I intend to leave right now.

Thank you, Mr. Chairman.

Mr. SCHEUER. If nobody objects, we will continue the hearing and we will immediately recognize the young lady.

If you will identify yourself, we will give you as long as you may need to make the explanatory comments that you wish to make.

Mrs. GORSUCH. I appreciate your gracious offer to allow the record to be set straight on this particular issue. I do share some concern that we are in fact in a process of examining one of the President's nominees.

I would like to say also for the record I am looking at this for the first time. I have not seen this memorandum before. This is obviously a memorandum directed to public affairs officials for certain segments which could be brought to the public's attention in bringing a very technical issue down to layman's terms.

To my knowledge, the original recommendation for the registration of the fumigant in question, which was, as the Congressman correctly pointed out, through a peer review process with the Science Advisory Panel, the Office of Pesticides' recommendation has been of long standing and has in no way been modified.

With that overall, I would take your gracious concession to allow our witness to make her testimony known to the Chair, and then I would appreciate it if we could focus on those issues of concern to this committee, rather than on personalities involved.

Mr. GORE. It is not my intention to focus on the personalities involved. It is the process that I have consistently tried to keep the focus on here. I have no quarrel with the personalities of any of the individuals over at EPA.

I want to correct one statement. You said it was directed to the public relations people. It is directed to Mr. Joe Panetta. We established earlier Mr. Panetta is the scientist at EPA who is involved in the RPAR process which is intimately involved with the risk assessment associated with this particular chemical. He is the fellow making the risk assessment.

Mrs. GORSUCH. For a briefing document for the Public Affairs Office, Congressman.

Mr. GORE. But to be based upon the Agency's risk assessment which had been arrived at through a tortuous, long process, and then he tried to unilaterally change that risk assessment just prior to the preparation of a document for public consumption that was to be based on the Agency's view of the risk involved.

If normal scientific procedures had been followed, the public would have been given a statement in understandable language that reflected the Agency's assessment of the risk of that chemical. Instead, the Agency was given a document that ignored the Agency's assessment of the document's risk but reflected instead the assessment by Mr. Todhunter of the risk, who tried to unilaterally change the Agency view.

Second, the comment was made that it was difficult to establish that this was, in fact, Mr. Todhunter's memo. I began the questioning by establishing the fact that the subcommittee staff has verified that this is Mr. Todhunter's memo with three separate officials in EPA who gave us evidence to that effect when they were questioned.

I would be glad to hear about the process if we want to proceed with that, or if you want to comment again, that is fine with me, too.

Mrs. GORSUCH. I would like to proceed with the actual evidence and process.

Miss Anne Barton of EPA is here and can provide you with the information.

Ms. BARTON. I am manager at present in the division of the Office of Pesticide programs that does the health effects evaluation. I am a biostatistician by training.

I was directing that part of the team that was doing the actual risk assessment for a possible request by California, doing a preliminary adjustment trying to suggest what the exposures might be under various circumstances.

Joe Panetta is in another division, responsible for writing the document, and if there were regulatory options—there were none in this case—but making it understandable to the public.

Joe Panetta brought me this handwritten note. I took it as a suggestion from Dr. Todhunter that we do a number of things, such as put the final risk that we estimate into a language that people could understand by comparing it to other risks, which I took as a suggestion to Joe Panetta's part of the team, and that we reduce the risk—to reflect the fact we are only talking about 1 year exposure, which is something that we were planning to do all along.

He also has given his opinion as to how the risk falls off when exposure is curtailed, when it is less than a lifetime exposure, which is our model for carcinogenics, because that is the way the animal experiments are conducted.

I spoke to Dr. Hunter about that and told him I wasn't familiar with that model, and he told me it was based on some biological considerations. We did not have a reference for it. We did not have time to review the matter in using different procedures, so we have used the procedure we have always used, which is to do what is called a linear reduction of the exposure, because we don't know anything more. It is a very rough procedure.

We did proceed with the risk assessment according to the exact same methodology that was used in the PD–23 that had been reviewed by the Scientific Advisory Panel and that, as I understand it, was sent over by either—I don't know whether it was Dr. Todhunter or the Acting Administrator, but it was sent over to the press office. I don't believe anything in that was changed.

Now, the risk Dr. Todhunter was talking about in his handwritten note is based upon an exposure that was estimated in the PD. It is a different exposure than we were thinking about, so the numbers are different, but the procedures we used were those used in the PD.

Mr. GORE. Did the final paper show figures different than the ones you were thinking about?

Ms. BARTON. No; when Dr. Todhunter wrote his handwritten note, he thought we were talking about the same exposure as in the old document. We were not, because California does not routinely treat oranges in this way. We were talking about an exposure based upon California possibly treating most of the oranges sold within the United States.

Therefore, our exposures and risk were different. Were we talking about the same exposures, the figures would have come out closer to 10 to the minus 6.

Mr. GORE. You said you used a linear correction for exposure time; is that correct?

Ms. BARTON. That is right. The estimated lifetime exposure is essentially what we did.

Mr. GORE. Do you think that is the correct way to do it?

Ms. BARTON. That is the way we have always done it, and I believe in being consistent. I believe it is the correct way.

Mr. GORE. That is the way the cancer assessment——

Ms. BARTON. That is the way the cancer assessment group does it. Insofar as you can say it is the correct way, we chose it out of ignorance. I don't believe we know how the risk changes with duration of exposure.

Mr. GORE. That is the accepted way to do it?

Ms. BARTON. It is the accepted and standard way to do it.

Mr. GORE. Let me read you from the second version of EPA's public statement on this matter:

"In preliminary calculations, the staff used a linear correction for exposure time. This is an incorrect procedure."

Ms. BARTON. It is my understanding that was a comment that was not released, but it was a comment on what we had done, and accompanied what we had done.

Mr. GORE. This was released. It is a "Note to Correspondents" dated August 21, 1981.

Now, you are saying that the linear correction is correct. This document, prepared with the assistance and advice of Mr. Todhunter, says this is an incorrect procedure. Why would he say it is an incorrect procedure?

Ms. BARTON. That was his opinion.

Mr. GORE. It comes out it is the Agency opinion, but the opinion that is identified as the Agency's view is contrary to this witness, who is offered as the expert in the Agency on risk assessment in this specific example.

Now, the Agency is saying something that is directly contrary to your view about the matters that you are expert on.

Ms. BARTON. I read that as an opinion on how we did things.

Mrs. GORSUCH. Mr. Chairman, with all due respect——

Mr. GORE. This says, "The U.S. Environmental Protection Agency today released the following statement concerning ethylene dibromide," and this was an attachment to that statement entitled "Note to Correspondents."

Mr. SCHEUER. Can we have the witness finish her sentence?

Mr. GORE. I think she had finished, Mr. Chairman. I don't want to put this person on the hook. There are a lot of people over at the Agency who don't agree with what is going on, and I am not saying you are necessarily one of them, but the fact is that a lot of the

career scientists and the professionals in the Agency feel that they are being yanked around for specialized reasons that reflect the views of Mrs. Gorsuch and perhaps President Reagan and others in the administration.

Ms. BARTON. I did not view that as Dr. Todhunter giving us any direction to change our risk procedure. I think he merely intended to express his opinion.

Mr. GORE. Your superiors did. Let me read you the text.

Staff interview with Edwin L. Johnson, who is Deputy Assistant Administrator for the pesticides program. Mr. Grumbley confronted him with this memorandum and he said:

> Yes, I guess I have seen it.
> Mr. Grumbley: What did you think of this?
> Mr. Johnson: An example of Todhunter playing scientist.
> Mr. Grumbley: Did you respond to that as orders?
> Mr. Johnson: No, they were orders to develop risk assessments. In his memo, Todhunter used poor methods. The methods were questionable. Statistical methods are only approximate.

As I indicated before, this interview was preceded with a rather tough recitation of the legal requirements to respond candidly to questions put to Mr. Johnson. This was not to volunteer, in any way.

Others in the Agency have the same attitude, that they are being asked to do things that their best scientific judgment would not lead them to do.

Mrs. GORSUCH. Mr. Chairman, seeking your advice, in light of the fact that the ranking minority member is no longer present, I would appreciate your counsel on whether or not we should continue to sit.

Mr. GORE. Mr. Chairman, I need not advise the chairman that a point of order can be made by members of the subcommittee in question, not by witnesses.

Mrs. GORSUCH. It is not a point of order, Mr. Congressman; it is a question of advice from the chairman.

Mr. SCHEUER. Let me say if any member of this subcommittee, or the full committee, came in here and objected, I would immediately terminate the hearing, but we frequently carry on hearings when only one member is present. I would be embarrassed to tell you how many hearings I have conducted as chairman when only I was present and, of course, the minority did not object. If they object now, under the House rules I would be required——

Mr. GORE. Mr. Chairman, I will try to finish up rather quickly, but I would like to return to a subject that you opened up with Mrs. Gorsuch earlier, and that is whether or not the EPA is seeking to shift some responsibility, some increased responsibility for its function to the State or to private institutions.

Your response earlier, as I understood it, was no. Is that correct, Mrs. Gorsuch?

Mrs. GORSUCH. Congressman, I see a continuing need for research done at the Federal level by the Environmental Protection Agency. We would hope to encourage simultaneous research and development both by industry and by the States.

There is no overall policy in the Environmental Protection Agency administration to shift the responsibilities which are ours to others parties.

I will have to comment in order to set the record straight on the prior characterization by the Congressman that there is dispute in science, as there are on many, many questions, whether linear corrections are the best way or whether, indeed, there are other models that might be pursued for projecting 1 year to a lifetime. I think that point was made by Ms. Barton, that in the past there had been a linear correction facsimile that had been used. It is certainly not the only one. I hope the Congressman would concur different scientists are entitled to their different scientific opinions, as has been expressed in EPA by all management.

To the extent there is an expression of a difference of opinion by a scientist who has excellent credentials, as does the President's nominee, and that you would like to examine, let me reiterate we would be happy to have Dr. Todhunter offer himself for examination and testimony by this committee following his confirmation.

Mr. SCHEUER. I think we ought to accept that, and I think we have had an extended discussion of this matter. I think it has been useful and I think at this time we ought to consider this particular matter closed.

Mr. GORE. I was going on to another subject, Mr. Chairman.

Let me conclude that by saying I am not prepared to say the linear correction mode is the correct procedure. Again, that is not the issue, which technique was used. It is the review procedure. It is the process by which the decision was made and the fact that the people within EPA upon whom the agencies normally rely for that judgment are—their judgment is substituted with the judgment of Mr. Todhunter.

Mr. SCHEUER. Congressman, I think we have really considered that point, and all of its implications and ramifications. You have made a perfectly clear point. I am very happy that Ms. Barton appeared and clarified it to a considerable extent.

I really think we have created a very fair, a very accurate and very full record on the point of process.

Mr. GORE. I am prepared to explore one more area.

Mr. SCHEUER. The time is late and we will now operate under the 5-min[illegible] rule.

Mr. [illegible]RE. Are you prepared to shift some of your responsibility to the p[illegible]vate sector?

Mrs. G[illegible]RSUCH. In what respect?

Mr. GO[illegible]E. In the Jovanovich memo we handed you earlier, on page 2 of that memo, this is to you, Mrs. Gorsuch, what the Agency was going to do, it says:

"Efforts in environmental engineering are being reduced in keeping with the policy of relying more heavily on the private sector to develop efficient pollution controls."

Now, that appears to indicate to me that one of the rationales for the cutbacks in the activities of EPA is to shift some additional responsibility to the private sector over things that EPA itself has done in the past.

Mrs. GORSUCH. Mr. Congressman, this relates back to the chairman's earlier question of whether or not it is best to focus Federal research efforts in one direction or the other.

As you will recall, the chairman indicated from his rather preliminary survey of industries that they are fully capable, at least in their opinion, of developing the control technologies if they are given the standards and if they are given the long-term risk assessment that is necessary.

I think it behooves us to understand that message, to concentrate our efforts in the arena where I believe they are most profitable in terms of establishing long-term risks, health risk assessments, rather than doing for industry their job of developing means to control them.

Yes, as I indicated to the chairman, we will continue to focus our research and development on what those health risks are, as opposed to the means of controlling them for the diversity of industry that exists out there.

Mr. GORE. I am not sure I heard an answer to the question in that.

Mrs. GORSUCH. To answer your question, there is no shift of responsibility. There will be a refocusing of our research effort on those areas in which I concur with the chairman we can be of most benefit at the national level.

Mr. GORE. Then the responsibility is abdicated to that extent. If it is not shifted and you are not doing it and you don't anticipate somebody else doing it, it is not to be done; right?

Mrs. GORSUCH. I do not feel that the major opportunity nor necessity for Federal research and development should be in the area of devising control techniques as much as it should be in focusing on what health risks are present in the environment and establishing standards for which, whether it is industry or other polluters, for them to meet.

Mr. GORE. But the health side is the part being cut the worst of all.

Mrs. GORSUCH. No, I think in looking at a single line item in a proposed budget you have missed the overall thrust of the research and development program.

Mr. GORE. I don't think so.

Mrs. GORSUCH. There are health risk studies going on in all of our research and development, and the fact they do not show up as specific line items in the budget is perhaps a regrettable accounting error. We may have to get our budget more in shape so that those are more highlighted for your examination and perusal.

If you would like, and I am prepared to do this for you, I can give you a survey and a dollar expenditure in 1982 terms of all health risk studies that are being conducted throughout research and development in the Agency.

Mr. GORE. Thank you, Mr. Chairman, for your courtesy in letting me participate today.

Mr. SCHEUER. Thank you, Mr. Gore, and thank you, Mrs. Gorsuch, for that offer.

I must say if Congressman Gore is missing the point, we are all missing the point, because we all miss a presentation of a comprehensive, holistic plan for research and development that compre-

hends and includes our concerns for the enormous risks to our health and our environment that are presented by our national drive to energy independence.

We have been over this this morning several times. I don't want to repeat myself. The hour is very late, but I have to say we are all missing this and we hope that you will give us a comprehensive report on the totality of the research and development effort on the implications of our drive toward massive increase in energy production in this country from oil, from coal, from conversion of coal to electricity, and from synfuels as well as all other forms.

We need that. We have all asked for it in one form or another and we hope very much we will get it as soon as possible.

Mrs. GORSUCH. I will be happy to provide that, Mr. Chairman. It is a matter of going through the ongoing programs and extracting that information, and I will be happy to do that for you.

Mr. SCHEUER. I yield to my colleague from Rhode Island.

Mrs. SCHNEIDER. I hope this has not already been addressed. To my knowledge, it has not been, and I apologize for not being able to be here the entire time. I had another commitment.

I am curious to know, and discuss a little bit, about acid rain. We are quite familiar with the fact that the President is committed to a strong research program in the area of acid rain. But this particular committee has had so many hearings on this topic, one after another after another that it appears to be quite clear that the information that has been collected, not to mention the field hearings that were held in Lake Placid by this committee and the activities in Canada that this committee has been aware of, that the information is very conclusive about the causes of acid rain, and I, myself, sat here and asked probably, I think, one of the most articulate people on the issue, "Yes, we know all about the problem. Now, what do you recommend as solutions?"

And he had solutions that he enumerated for us, and I wondered to what degree the Environmental Protection Agency is pursuing a plan for preventive measures in the area of acid rain.

Mrs. GORSUCH. As the Congresswoman correctly identified, there has been a massive expenditure by the American taxpayer, part of it channeled through the Environmental Protection Agency, for a 10-year assessment of the entire problem of acid deposition. Our research in that effort has not reached the same conclusion in terms of what goes up, how is it transformed, how does it come down, how far is it transported, when it is deposited, what are the effects of the deposition depending on the ecological characteristics of the receiving territory?

There are simply many, many unknowns that are currently being pursued through the active research and development in an effort that is truly Government-wide. As I indicated, EPA has a large part of it this year in terms of programs totaling something like $9 million. That is only part of the program. Other Government-wide efforts totaling $18 million this year alone are being conducted.

We are far, I believe, from being able to recommend those regulatory initiatives that should be pursued in addressing this very complex area.

Mrs. SCHNEIDER. So in essence, what you are saying is that, at the end of 10 years, more likely than not, we will then be in a position to have a design program whereby we will minimize and enforce laws that will eliminate the problems of acid rain?

Mrs. GORSUCH. No, Congresswoman, I could not tell you with any degree of certainty what the results of research will show and whether or not that time frame is 10 years, 5, or 20. I think all of us are hopeful the research will be as inclusive as possible and may or may not recommend additional regulatory approaches in certain areas.

But what I can tell you at the same time is that there is a great deal of scientific uncertainty, one in which the American public is making a very significant investment and we are pursuing that through efforts in the EPA as well as Government-wide.

Mrs. SCHNEIDER. If I might mention two messages that I have heard so often that I can wake up screaming thinking of these at night, but there is conclusive information that there are detrimental effects of auto emissions that are not controlled. This is one source that we have heard of numerous times before this committee.

And the second one in the discussions of acid rain has been the fossil fuels, and during the burning of various fossil fuels. It would seem to me if we are to put our research dollars and priorities where those research dollars are spent so we might get the most efficient use of those dollars, everything that we have heard through numerous hearings before this committee points in the direction of those two sources as being some of the leading causes of acid rain.

Of course, I understand we must move beyond those points, but programs there would be an important priority area for us to spend our dollars in.

Mr. CARNEY. Would the gentlewoman yield on that point?

Mrs. SCHNEIDER. Yes, I will yield.

Mr. CARNEY. Mr. Chairman, I would like to make a point of order that under the Rules of the House, the House is now sitting under the 5-minute rule and we did not receive permission to sit and take testimony, and I object to the hearing continuing under the rule.

Mr. SCHEUER. The gentleman's objection is well taken.

Before I suspend the hearing, I want to thank the witnesses for staying just short of 5 hours of testimony. You have been through a long day. We have asked a lot of complicated and perplexing questions. We want to thank all three of you for your courtesy, forbearance, and patience.

I hereby declare the hearing is adjourned.

[Whereupon, at 2:20 p.m. the subcommittee adjourned, to reconvene at the call of the Chair.]

Appendix A

STUDY OF ADMINISTRATIVE SUPPORT POSITIONS

September 1981

(Revised)

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°Not in charts

AGENCYWIDE ADMINISTRATIVE/MANAGEMENT SUPPORT

ISSUE

What is the optimal arrangement and staffing level of the Immediate Office of AA's, Office Directors, and Division Directors to assure appropriate administrative/management support?

APPROACH

Inventoried all positions in the Agency classified in administrative/management support type job series. These 86 job series (list attached) were then categorized into 16 functional job groupings (listed below) and staffing guidelines were developed for various levels and sizes of organizational components in the Agency, i.e., staffing guidelines for the Immediate Offices of the AA's and for Offices and Divisions. These staffing guidelines were then compared to existing administrative support staffs of the AA's, Offices and Divisions. (Summary of data compiled during study attached).

FINDINGS

1. About twenty-six percent of the EPA's total manyears are devoted to administrative/management support activities, as follows:

Administrative		Program Management		Public/External Affairs	
1,980 (20%)*		455 (4%)*		247 (2%)*	
Safety/Sec.	19	Program Mgt.	81	Public Info.	96
Personnel	240	Program Anal.	374	TV/Graphic Arts	39
Fac. & Ser.	240			Writer/Editor	112
Cont. & Proc.	197				

Administrative cont.

Computer	367
Financial	212
Mgt. Anal.	108
Library	44
Gen. Admn.	468
Admn. Officer	85

* Percentages are based on 13, 475 FTE on-board as of 7-11-81.

FINDINGS cont.

2. Administrative support positions in EPA are distributed in an erratic pattern, e.g., a Division of 40 employees with two Administrative Officers versus a Division of 200 employees with zero Administrative Officers -- some Offices in which all Divisions have Administrative Officers and other Offices in which none of the Divisions have Administrative Officers. The same applies to Management Analysis, General Administration and other categories of positions.

3. Many isolated organizational components appear to have significant overstaffing in Administrative areas, i.e., the NEIC in Denver, the EMSL Laboratory in Las Vegas.

4. The Agency is probably devoting something like 1200 manyears annually to the budgetary process. High overhead in this area appears to be mostly a result of the complex way in which we have gone about managing our resources and from current resource constraints.

5. There are clear economies of scale, e.g., the more centralized the administrative functions, the fewer people it takes to do it. The bigger the Regions the smaller the relative size of the administrative staff.

5. About 16.8% of the Agency's resources are devoted to secretarial/clerical duties. This compares with 14% in the Energy Department; 19.4% at State; 9.8% at NASA; and 14.3% at HUD.

GOAL

As top management attempts to deal with the issue of limiting the amount of administrative support there is one axiom that must be kept in mind -- there is an irreducible level of administrative support functions and activities which must and will be carried out by someone.

The challenge to top management is to provide that sufficient amount of administrative support necessary to carry out the program and no more. It is counter-productive to cut administrative staffs to the point that high-graded professional staff are carrying out duties more appropriate to a GS-6 clerk.

OBJECTIVES

Based on these findings, top management of the Agency should give consideration to the establishment of the following:

1. Immediate Agencywide position management controls aimed at decreasing the percentage of administrative/management support positions.
2. A more equitable distribution of administrative positions based on established staffing guidelines and workload distribution.

3. Consolidation of administrative support positions to the fullest extent practicable in order to maximize the utilization of personnel and equipment.

SHORT-RANGE APPROACHES

1. Staffing Guidelines - The Task Force has developed staffing guidelines on the minimal numbers of support positions generally required for various levels and sizes of organizational components. These guidelines can be applied against present staffing levels and corrective action mandated within specific time frames.

2. AA Discretion - An alternative is to provide the AA's with the staffing guidelines and other statistical material and permit them to optimize the sizes of administrative staffs and reduce as appropriate through attrition.

LONG-RANGE APPROACHES

1. Target Selected Areas - We can isolate out those organizational components that clearly appear to have excessive numbers of support positions and establish teams to study those organizations in considerable depth and recommend appropriate changes.

2. Development of a Formula Control Approach - This would require the application of complex mathematical formulas based on workload and other factors. The Department of Defense has refined this approach over the years to the point of a fine art. Drawbacks for EPA are

(a) it would take a considerable period of time, perhaps years, to develop a reliable system; and (b) it is very difficult to quantify many of the types of functions carried out in EPA.

3. Position Control System - Develop and establish an ongoing system as described in the "position control system" report.

4. Budgetary Constraints - The budgeting process could be used to squeeze out excessive numbers of positions.

7/28/81

	PFT	PPT/OPFT
SAFETY GROUP		
018 - Safety Management Series	8	2
019 - Safety Technician Series	1	1
803 - Safety Engineering Series	2	2
SECURITY GROUP		
080 - Security Administration Series	6	0
CIVIL RIGHTS GROUP		
160 - Civil Rights Analysis Series	42	19
PERSONNEL MANAGEMENT SERIES		
201 - Personnel Management Series	81	13
203 - Personnel Clerical and Assistance Series	47	26
212 - Personnel Staffing Series	40	10
221 - Position Classification Series	14	0
230 - Labor Management and Employee Relations Series	5	1
233 - Labor Relations Series	3	0
235 - Employee Development Series	7	3
GENERAL ADMINISTRATIVE GROUP		
301 - Miscellaneous Administration and Program Series	338	161
FACILITIES GROUP		
342 - Support Services Administration and Program Series	11	1
305 - Mail and File Series	30	26
309 - Correspondence Clerk Series	2	0
350 - Equipment Operator Series	24	6
351 - Printing Clerical Series	2	0
356 - Data Transcriber Series	3	6
385 - Teletypist Series	3	0
388 - Cryptographic Equipment Operation Series	0	6
391 - Communications Management Series	1	0
393 - Communications Specialist Series	3	0
1601 - General Facilities and Equipment Series	3	0
1640 - Facility Management Series	3	0
1654 - Printing Management Series	10	0
1670 - Equipment Specialist Series	1	0
2001 - General Supply Series	5	1
2003 - Supply Program Management Series	6	0
2005 - Supply Clerical and Technician Series	22	10
2050 - Supply Cataloging Series	1	0
2130 - Traffic Management Series	1	0
2131 - Freight Rate Series	1	0
2132 - Travel Series	1	1
2134 - Shipment Clerical Series	1	0

Attachment 1

FACILITIES GROUP - CONTINUED		PFT	PPT/OPFT
WG	2601 - Electronic Equipment Installation and Maint. Family	2	0
	2620 - Electronic Mechanic Family	0	1
	2805 - Electrician Family	2	4
	3359 - Instrument Mechanic Family	2	3
	3502 - Laboring Family	1	24
	3566 - Custodial Working Family	0	11
	4206 - Plumbing Family	1	0
	4400 - Printing Family	12	1
	4600 - Wood Working Family	0	1
	4742 - Utility Systems Repairing and Operations Family	1	0
	4749 - Maintenance Mechanic Family	10	1
	5306 - Air Conditioning Family	1	0
	5309 - Heating & Boiler Plant Equipment Family	7	0
	5403 - Incinerator Operations	1	0
	5700 - Transporation/Mobile Equipment Operations Family	15	0
INFORMATION MANAGEMENT GROUP			
	330 - Digital Computer Systems Administrative Series	9	0
	332 - Computer Clerk Series	5	2
	334 - Computer Specialist Series	262	27
	335 - Computer Clerk and Assistant Series	32	44
ADMINISTRATIVE OFFICER			
	341 - Administrative Officer	80	6
MANAGEMENT ANALYST/TECHNICIAN GROUP			
	343 - Management Analysis Series	65	18
	344 - Management Clerical and Assistance Series	18	13
PROGRAM MANAGEMENT GROUP			
	340 - Program Management Series	81	0
	345 - Program Analysis Series	316	73
FINANCIAL MANAGEMENT GROUP			
	504 - Budget and Accounting Series	3	0
	505 - Financial Management Series	14	0
	525 - Accounting Technician Series	325	15
	530 - Cash Processing Series	2	2
	540 - Voucher Examining Series	36	12
	544 - Payroll Series	11	5
	560 - Budget Administration Series	34	5
	501 - General Accounting Clerical and Administrative Series	42	6
	1160 - Financial Analysis Series	7	1

PUBLIC INFORMATION GROUP	PFT	PPT/OPFT
1001 - General Arts and Information Series	6	1
1081 - Public Information Series	72	21
AUDIO-VISUAL GROUP		
1020 - Illustrating Series	6	0
1060 - Photography Series	2	0
1071 - Audio-Visual Production Series	5	2
1034 - Visual Information Series	19	7
WRITER-EDITOR GROUP		
1082 - Writing and Editing Series	45	26
1083 - Technical Writing and Editing Series	10	6
1087 - Editorial Assistance Series	22	12
CONTRACTS AND PROCUREMENT GROUP		
1102 - Contract and Procurement Group	121	12
1103 - Industrial Property Management Series	2	0
1105 - Purchasing Series	30	5
1106 - Procurement Clerical and Assistance Series	22	11
LIBRARIAN GROUP		
1410 - Librarian Series	19	5
1411 - Library Technician Series	10	14
CLERICAL		
312 - Clerk-Stenographer	43	54
316 - Clerk-DMT (Obsolete)	2	0
318 - Secretary	1,030	181
322 - Clerk-Typists	252	715
303 - Miscellaneous Clerk and Assistant Series	192	270

TYPES OF POSITIONS INCLUDED

(Total Agency + .8 OPFT = 13,475)

TYPE POSITION	PFT + .8 x OPFT
ADMINISTRATIVE	
Safety	13
Security	6
Personnel	240
Facilities & Services	240
Contracts & Procurement	197
Computer	367
Financial	212
Management Analyst	108
Library	44
General Administration	468
Administrative Officers	85
TOTAL:	1,980
PROGRAM MANAGEMENT	
Program Management	81
Program Analyst	374
TOTAL:	455
PUBLIC/EXTERNAL AFFAIRS	
Public Information	96
Television/Graphic Arts	39
Writer/Editor	112
TOTAL:	247

Note: The average number of workyears worked by OPFT's is assumed to be 80% of the total OPFT's on board. This was determined by dividing the actual hours paid to OPFT's for any pay period by the actual hours in the pay period and representing this as a percentage of the total OPFT's on board.

CLERICAL SUPPORT

TYPE POSITION	PFT+.8xOPFT	PFT	OPFT	.8xOPFT
Secretaries	1,175			
Clerk Typist	834			
Clerk Steno	86			
Miscellaneous Clerk	410			
TOTAL:	2,505	1,529	1,220	976

OVERALL AGENCY

(13,475)

TYPE POSITION	TOTAL (Inc. Cler.)	PERCENT OF AGENCY TOTAL	CUMULATIVE TOTAL	CUMULATIVE PERCENT
ADMINISTRATIVE	2,695	20%	2,695	20%
PROGRAM MANAGEMENT	541	4%	3,236	24%
PUBLIC/EXTERNAL AFFAIRS	292	2%	3,528	26%

Note: Included in the "type position" total is a percentage of clerical as determined by the percentage of clerical in the Agency.

COMPARISON -- 1977-1981
(PFT & PPT)

ASST. ADMINISTRATOR	TOTAL		ADMN./MGT. POSITIONS		PERCENT	
	1977	1981	1977	1981	1977	1981
ADMINISTRATION	439	554	169	167	38	30
PLANNING & MGMT.	1,153	1,208	1,153	1,208	100	100
ENFORCEMENT	352	511	55	55	15	10
AIR, NOISE & RADIATION	950	821	187	131	20	16
WATER & WASTE MGMT.	1,090	815	245	174	22	21
PESTICIDES & TOXICS	90	1,213	20	181	22	15
RESEARCH & DEVELOP.	297	299	47	57	16	19
RES. & DEV. LABS	1,570	1,682	240	201	15	12
REGIONS	4,118	4,873	947	822	23	17
TOTAL:	10,059	11,976	3,063	2 996	30	25

ADMINISTRATIVE/MANAGEMENT POSITIONS BY AA/REGION

OVERALL AGENCY
(13,475)

AA/REGION	TOTAL	ADMN.		PROGRAM MANAGEMENT		PUB./EXT. AFFAIRS		TOTAL SUPPORT	PERCENT	NUMBER SERVICED PER TOTAL SUPPORT
		#	%	#	%	#	%			
ADMINISTRATOR	630	128	20%	12	2%	56	9%	196	31%	3.2
ASSOC. ADMINISTRATOR	587	140	24%	82	14%	7	1%	229	39%	2.6
AA FOR ADMN.	1,134	1,064	94%	45	4%	25	2%	1,134	100%	1.0
AA FOR WATER	786	95	12%	82	10%	15	2%	192	24%	4.0
AA FOR SOLID WASTE & ER	312	26	8%	25	8%	9	3%	60	19%	5.2
AA FOR AIR, NOISE & RAD	1,126	141	13%	34	3%	15	1%	190	17%	5.9
AA FOR PESTICIDES	1,361	134	10%	62	5%	33	2%	229	17%	5.9
AA FOR RES. & DEV.	2,420	264	11%	53	2%	50	2%	367	15%	6.6
REGIONS	5,119	703	14%	146	3%	82	2%	931	15%	5.5
TOTAL:	13,475	2,695	20%	541	4%	292	2%	3,528	26%	3.8

Note: These totals include PFT's and .8 OPFT's and the "Admin.," "Program Management," "Public/Ext. Affairs" and "Total Support" include a standard percentage of clerical.

HEADQUARTERS ADMINISTRATIVE/MANAGEMENT POSITIONS BY AA

(PFT + PPT)

ASST. ADMINISTRATOR	TOTAL PERMANENT POSITIONS	PERCENT OF ADMN./MGT. POSITIONS	PERCENT OF ADMN./MGT. POSITIONS	POSITIONS PER ADMN./MGT.POSITIONS
AA FOR WATER	623	144	23%	4.3
AA FOR SW & ER	263	38	14%	6.9
AA FOR AIR, NOISE & RAD	390	60	15%	6.5
AA FOR PEST. & TOX'S.	1,267	181	14%	7.0
AA FOR RES. & DEV.	298	57	19%	5.2

Note: General clerical not included.

FIELD ADMINISTRATIVE/MANAGEMENT POSITIONS BY AA

(PFT + PPT)

ASST. ADMINISTRATOR	TOTAL PERMANENT POSITIONS	PERCENT OF ADMN./MGT. POSITIONS	PERCENT OF ADMN./MGT. POSITIONS	POSITIONS PER ADMN./MGT.POSITIONS
AA FOR WATER	46	4	9%	11.5
AA FOR SW & ER	0	0	0	0
AA FOR AIR, NOISE & RAD	613	101	16%	6.0
AA FOR PEST. & TOX'S.	0	0	0	0
AA FOR RES. & DEV.	1,677	202	12%	8.3

Note: General clerical not included.

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TOTAL AGENCY

ADMINISTRATIVE/MANAGEMENT POSITIONS BY AA
(PFT + PPT)

AA/REGION	TOTAL PERMANENT POSITIONS	TOTAL PERMANENT ADMN./MGT. POSITIONS	PERCENT OF ADMN./MGT. POSITIONS	NUMBER OF TOTAL PERM.POS. PER ADMN/MGT. POS'S.
AA FOR WATER	669	149	22%	4.5
AA FOR SW & ER	263	38	14%	7.0
AA FOR AIR, NOISE AND RAD	1,003	161	16%	6.3
AA FOR PESTICIDES AND TOXICS	1,267	182	14%	7.0
A FOR R&D	1,975	259	13%	7.6

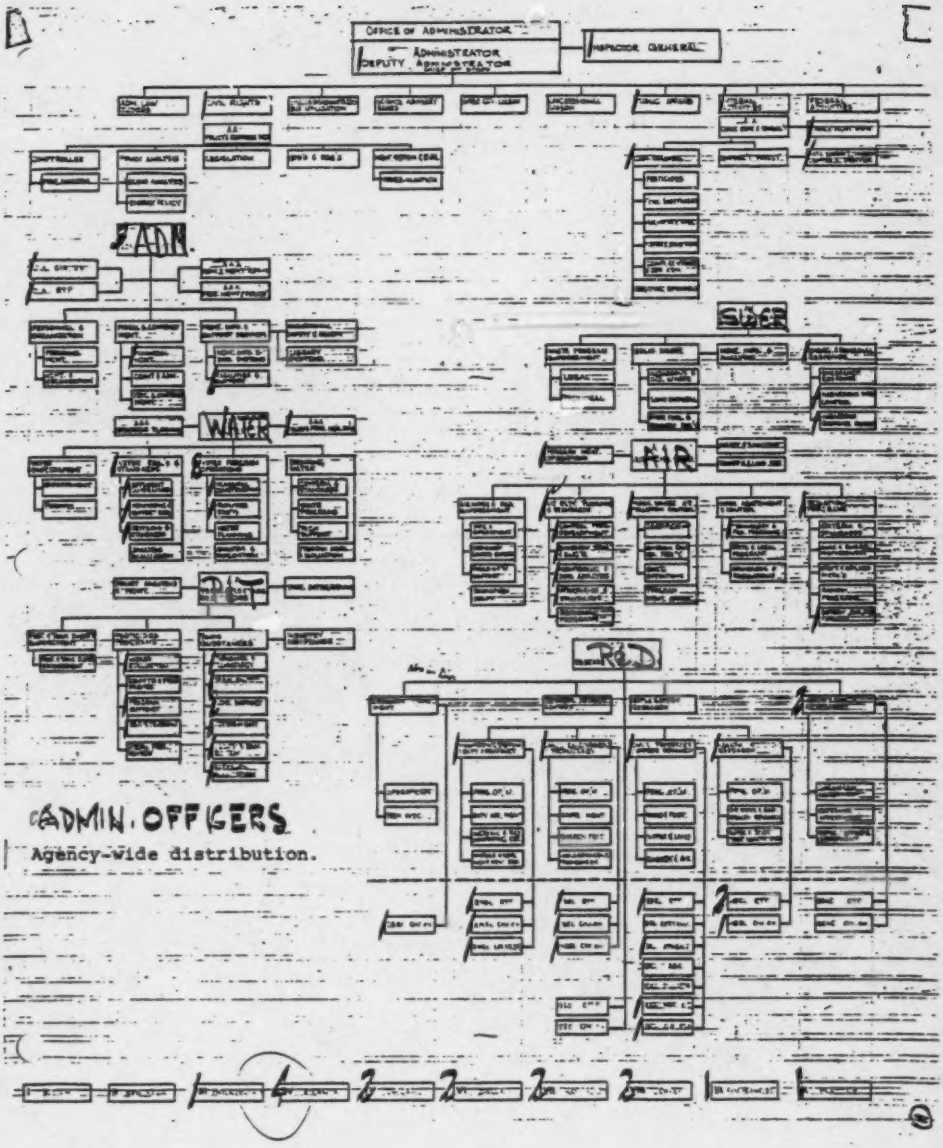
Note: General clerical not included.

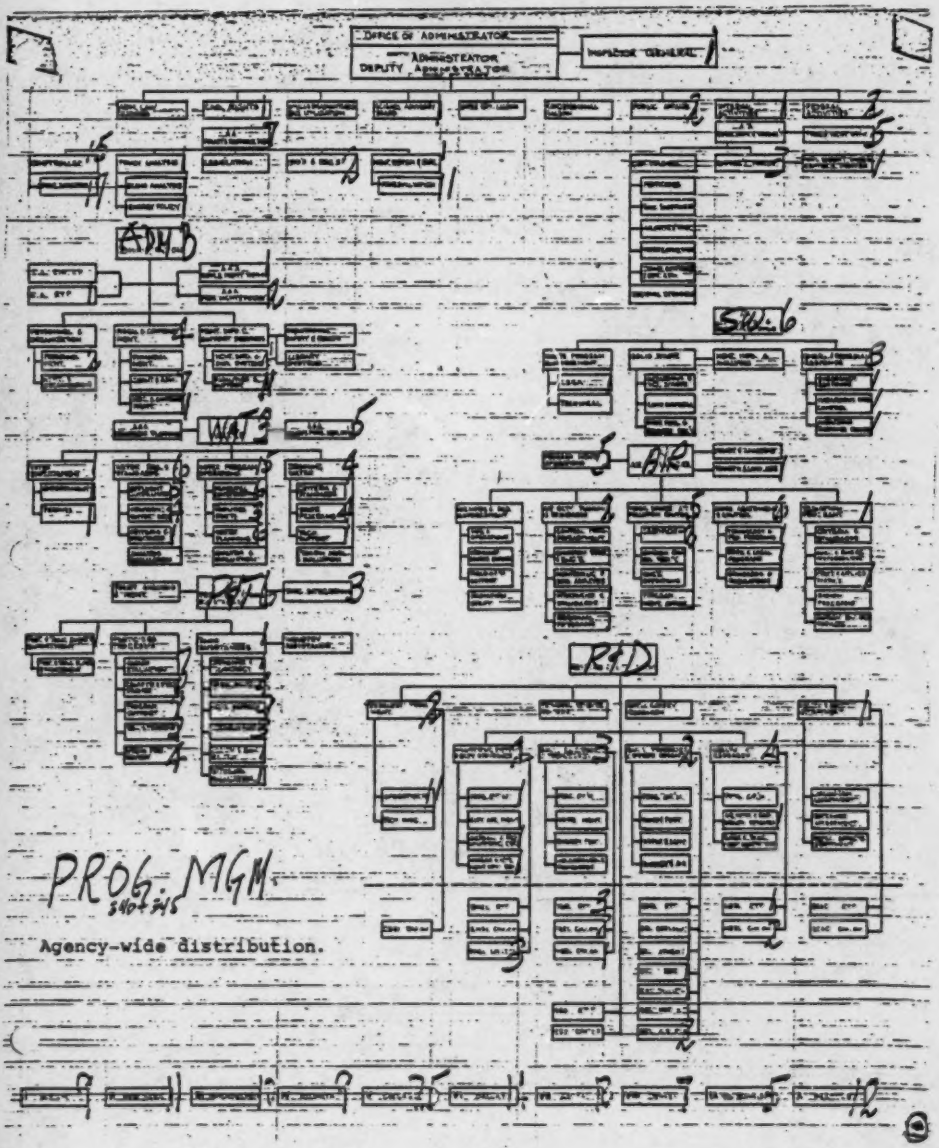
ADMINISTRATIVE/MANAGEMENT POSITIONS BY AA

INCLUDING OA/HQ'S-CIN-RTP
(PFT + PPT)

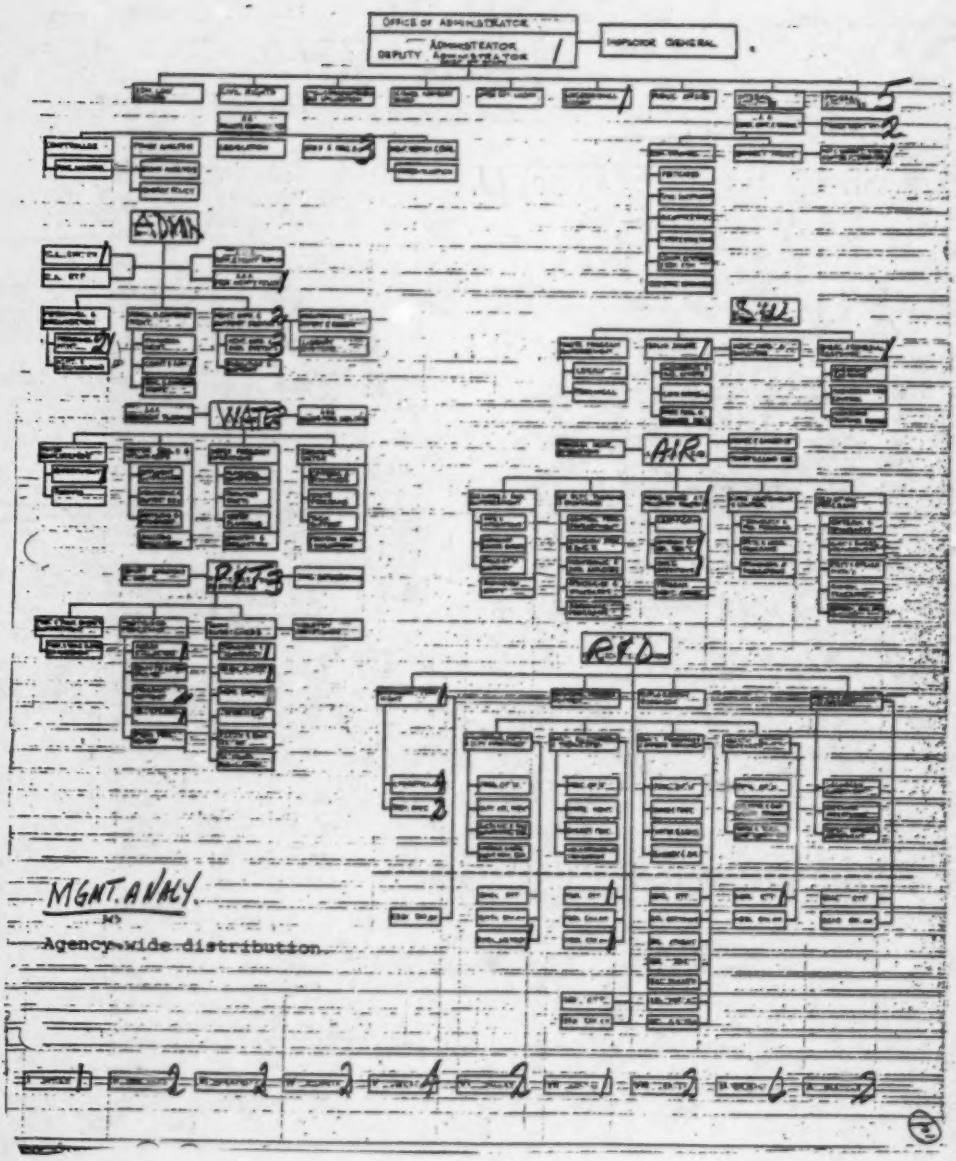
AA	TOTAL	ADMN./MGT. POSITIONS HQ'S	SHARE OF OA-HQ POSITIONS	ADMN./MGT. POSITIONS FIELD	SHARE OF OA/CIN-RTP POSITIONS	TOTAL ADMN./MGT. POSITIONS	# SERV. PER TOTAL ADMN./MGT. TYPE	PERCENT
AA FOR WATER	649	144	77	4	3	228	2.85	35%
AA FOR SW & ER	263	38	32	0	0	70	3.75	27%
AA FOR AIR, NOISE & RAD	1,003	60	49	101	29	239	4.20	24%
AA FOR PESTICIDES AND TOXICS	1,267	181	157	0	0	338	3.75	27%
AA FOR R & D	1,975	57	35	201	217	511	3.86	26%

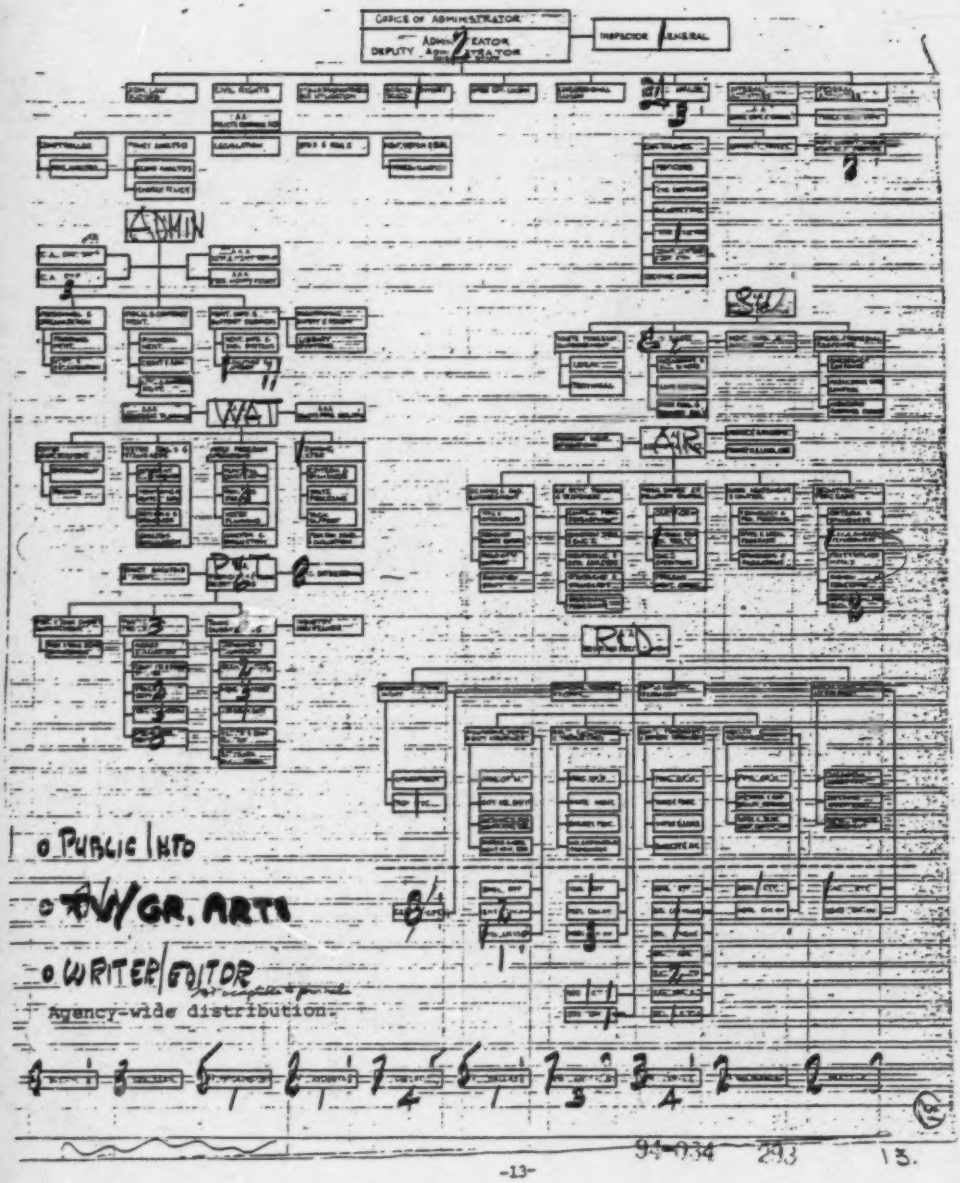
Note: General clerical not included.

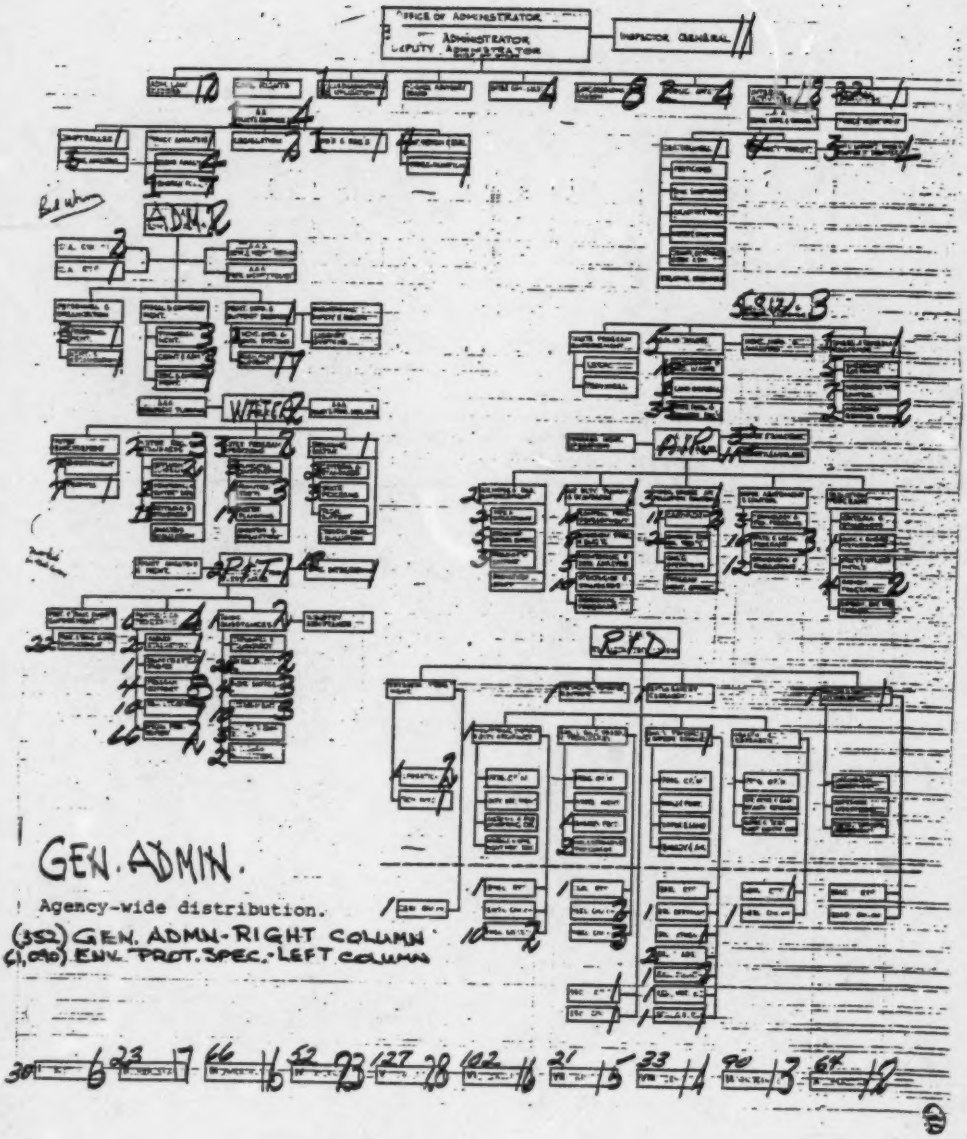

OFFICE OF ADMINISTRATOR
ADMINISTRATOR
DEPUTY ADMINISTRATOR
INSPECTOR GENERAL
ADM.
WATER
AIR
R&D
ADMIN. OFFICERS
Agency-wide distribution.



Agency-wide distribution.


OFFICE OF ADMINISTRATOR
ADMINISTRATOR
DEPUTY ADMINISTRATOR
INSPECTOR GENERAL
ADM.
WATER
AIR
R.F.D.
MGMT. ANALY.
Agency-wide distribution


OFFICE OF ADMINISTRATOR
DEPUTY ADMINISTRATOR
INSPECTOR GENERAL
ADMIN
WAT
AIR
R&D
o PUBLIC INFO
o INT'L/GR. AFFS
o WRITER/EDITOR
Agency-wide distribution:

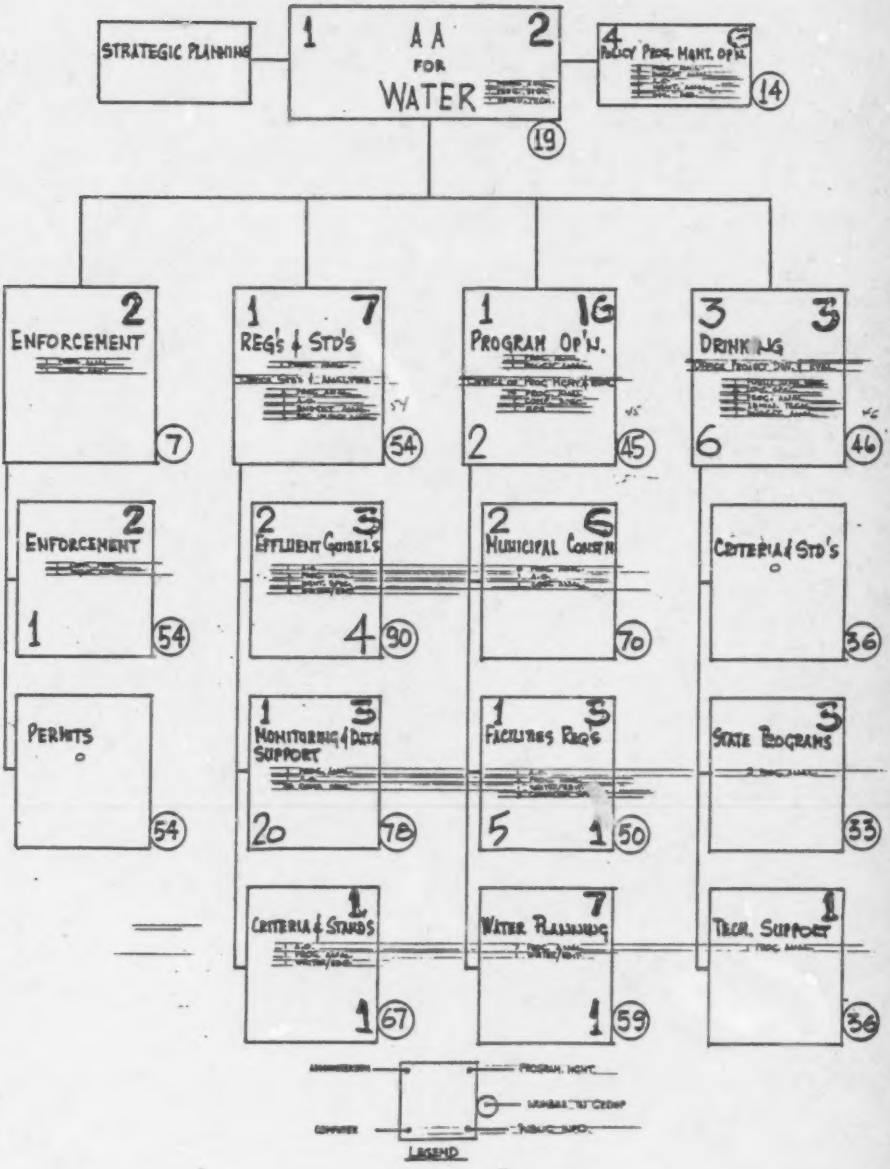

OFFICE OF ADMINISTRATOR
ADMINISTRATOR
DEPUTY ADMINISTRATOR
INSPECTOR GENERAL
ADMIN.
WATER
AIR
SOLID WASTE
PESTICIDES
R&D
GEN. ADMIN.
Agency-wide distribution.
(352) GEN. ADMN-RIGHT COLUMN
(1,090) ENVL. PROT. SPEC.-LEFT COLUMN

HEADQUARTER'S OFFICES
ADMINISTRATIVE SUPPORT
(PFT & PPT)

OFFICES	TOTAL EMPLOYEES PFT + PPT	TOTAL ADMINISTRATIVE PFT + PPT	SERVICED PER ADMN. TYPE
AA FOR WATER - IMM. OFFICE	29	15	1.9
Water Enforcement	96	7	13.7
Water Reg's. & Standards	234	49	4 8
Water Prog. Op's. (Less NTOTC)	176	52	3.4
Water Drinking (Less TSD)	91	17	5.4
AA FOR SOLID WASTE-IMM. OFF.	1	0	0
Waste Prog. Enforcement	23	11	2.0
Solid Waste	49	16	3.0
Emergency & Rem. Response	90	21	4.3
AA FOR AIR, NOISE & RAD - IMMEDIATE OFFICE	40	9	4.4
Air, Noise & Rad Enfor.	182	7	26.
Air Quality P&S - RTP	281	23	12.2
Mobile Source AP Control (Less Ann Arbor)	50	27	1.9
Noise Abatement & Control	70	13	5.4
Radiation Programs	153	13	11.8
AA FOR PEST. & TOX.-IMM. OFF.	81	23	3.5
Pest. & Toxics Enforce.	54	1	54.
Pesticides Programs	643	90	7.1
Toxic Substances	489	68	7.2
AA FOR RES. & DEV. - IMM. OFF.	35	3	11.7
R&D Mon. Sys. & Qual. Assur.	36	6	6.
R&D Env. Eng'g. & Tech.	58	4	14.5
R&D Env. Proc's. & Effects	58	4	14.5
R&D Health Research	30	7	4.3
R&D Prog. Mgt. (Less CERI)	~~18~~ 28	~~16~~ 29	~~1.1~~ 1.6
R&D Health & Env. Assess. (Less CIN and RTP)	33	4	8.3

Note: General clerical not included.

ADMINISTRATIVE POSITION DISTRIBUTION



ADMINISTRATIVE SUPPORT BY JOB CATEGORY

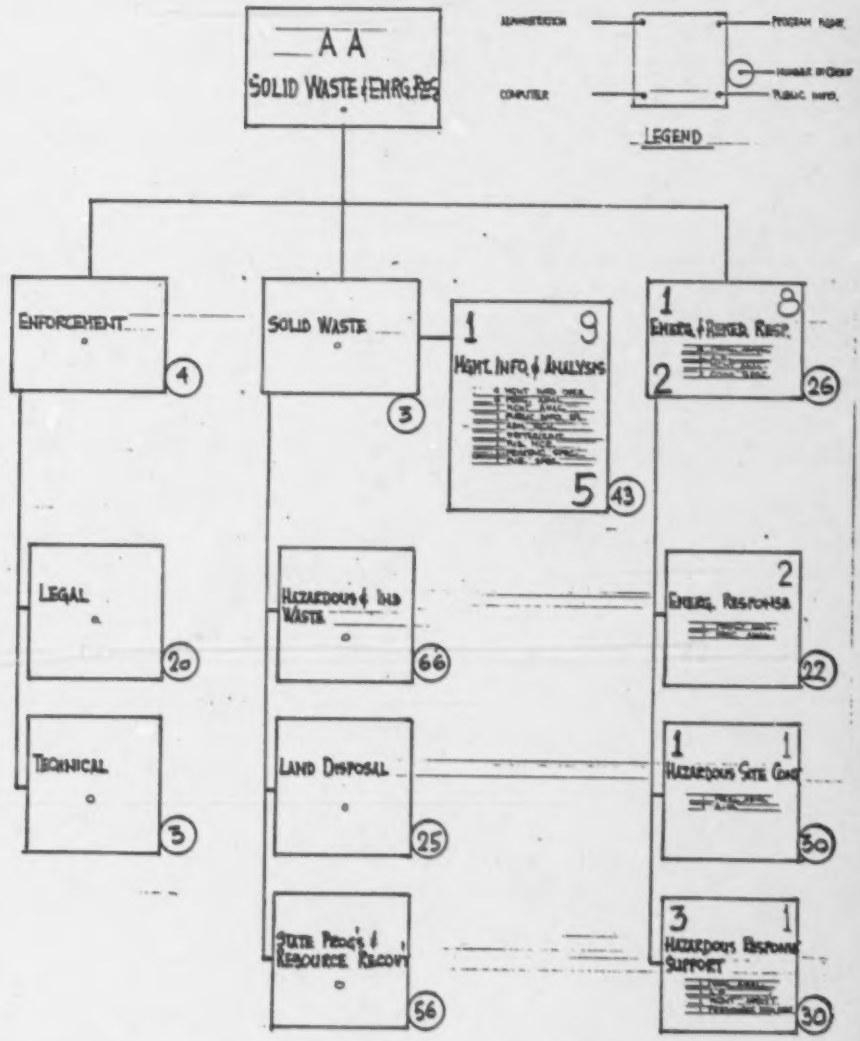
AA FOR WATER

PFT+PPT

TYPE POSITION	WATER ENFORCEMENT	WATER REG.'S. AND STANDARDS	WATER PROG'S. OPERATIONS	DRINKING WATER	IMMEDIATE OFFICE
SAFETY					
SECURITY					
CIVIL RIGHTS					
PERSONNEL MGMT.					
GENERAL ADMN.	1	6	5	1	2
FACILITIES & SER.					1
COMPUTER	2	18	9	7	
ADMN. OFFICER		4	4		1
MGMT. ANALYST	1				1
PROGRAM MGMT.	3	14	30	9	8
FINANCIAL MGMT.		1	1	1	2
PUBLIC INFO.			1	1	
TV/GRAPHIC ARTS					
WRITER/EDITOR		6	3		
CONTRACTS					
LIBRARY					
TOTAL:	7	49	53	20	15

Note: General clerical not included.

ADMINISTRATIVE POSITION DISTRIBUTION



POSITIONS BY JOB CATEGORY

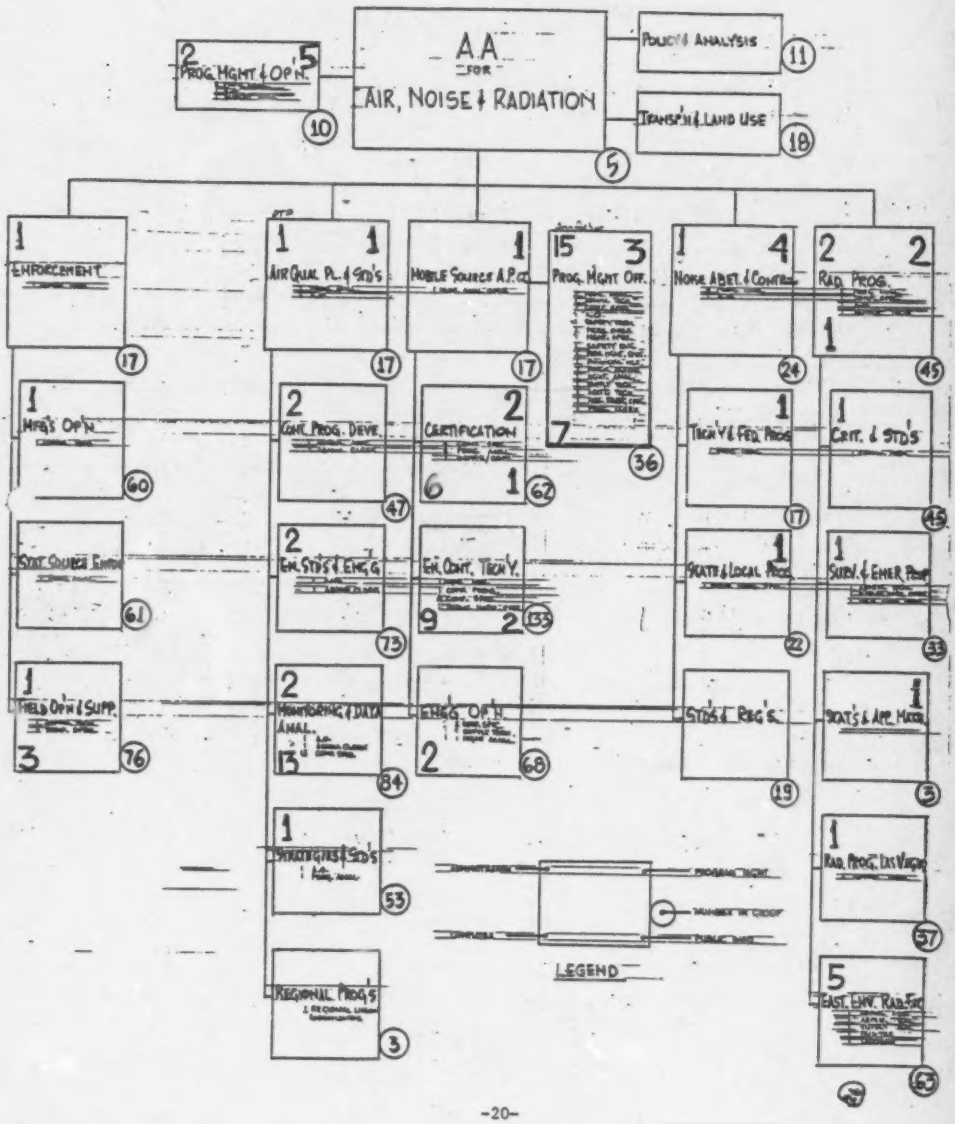
AA FOR SOLID WASTE & EMERGENCY RESPONSE

PFT + PPT

TYPE POSITION	WASTE PROGRAM ENFORCEMENT	SOLID WASTE	EMER. & REMEDIAL	IMMEDIATE OFFICE
SAFETY				
SECURITY				
CIVIL RIGHTS				
PERSONNEL MGMT.				
GENERAL ADMN.		3	3	
FACILITIES & SER.				
COMPUTER			2	
ADMN. OFFICER			3	
MGMT. ANALYST		1	1	
PROGRAM MGMT.	1	6	11	
FINANCIAL MGMT.			1	
PUBLIC INFO.		4		
TV/GRAPHIC ARTS				
WRITER/EDITOR		2		
CONT. ACTS				
LIBRAR				
TOTAL:	1	16	21	

Note: General clerical not included.

ADMINISTRATIVE POSITION DISTRIBUTION



AA FOR AIR, NOISE & RADIATION

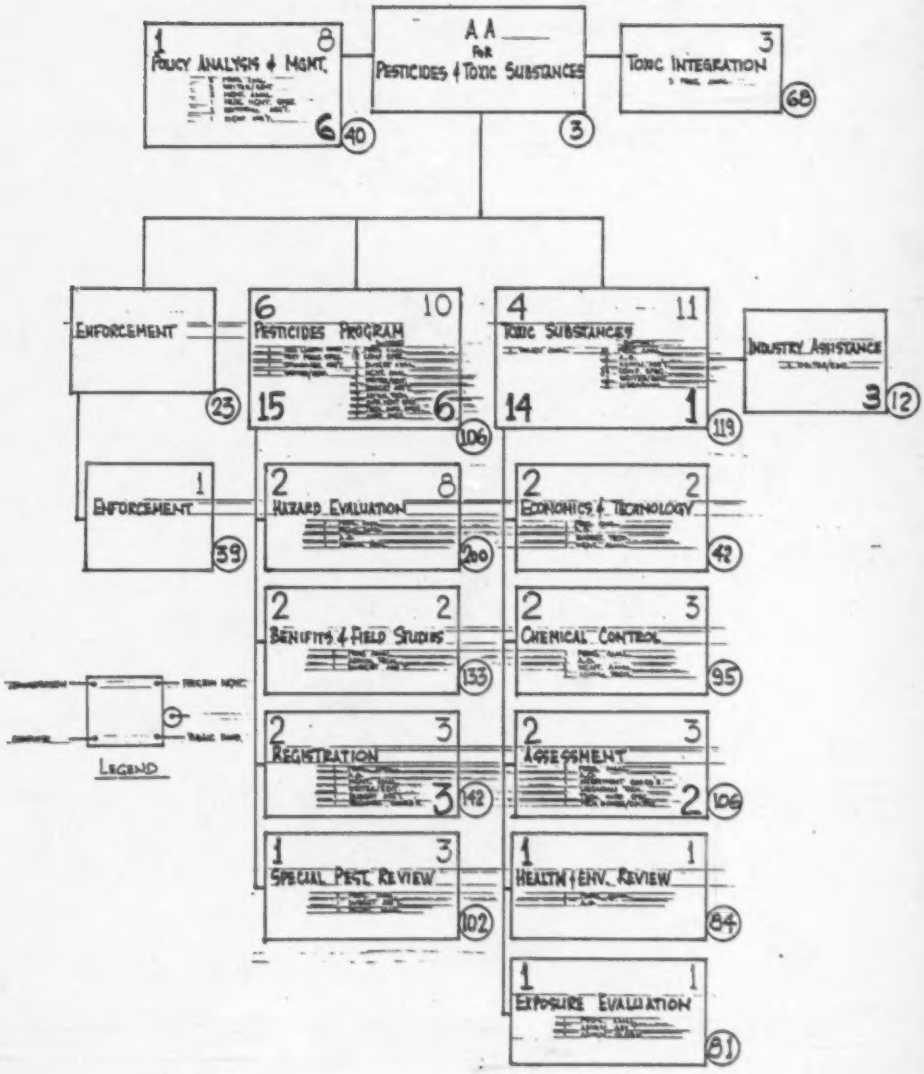
(Includes Ann Arbor)

PFT + PPT

TYPE POSITION	AIR, NOISE, & RAD ENFORCE.	AIR QUALITY PLG. & STDS.	MOBILE SOURCE AP CONTROL	NOISE ABATE. AND CONTROL	RADIATION PROGRAMS	IMMEDIATE OFFICE
SAFETY			1			
SECURITY						
CIVIL RIGHTS						
PERSONNEL MGMT.			5			
GENERAL ADMN.		1	3	3	2	
FACILITIES & SERV.	3		29		1	1
COMPUTER	3	13	17			
ADMINISTRATIVE OFF.		5	1	1	2	1
MANAGEMENT ANALYST			3			
PROGRAM MGMT.		4	7	9	2	6
FINANCIAL MGMT.			2		2	1
PUBLIC INFORMATION .	1		1		1	
TV/GRAPHIC ARTS						
WRITER/EDITOR			1		2	
CONTRACTS			3			
LIBRARY						
TOTAL:	7	23	73	13	13	9

Note: General clerical not included.

ADMINISTRATIVE POSITION DISTRIBUTION


AA FOR PESTICIDES & TOXIC SUBSTANCES
3
1 8 POLICY ANALYSIS & MGMT. 6 40
3 TOXIC INTEGRATION 68
ENFORCEMENT 23
6 10 PESTICIDES PROGRAM 15 6 106
4 11 TOXIC SUBSTANCES 14 1 119
INDUSTRY ASSISTANCE 3 12
1 ENFORCEMENT 39
2 8 HAZARD EVALUATION 200
2 2 ECONOMICS & TECHNOLOGY 42
2 2 BENEFITS & FIELD STUDIES 133
2 3 CHEMICAL CONTROL 95
2 3 REGISTRATION 3 142
2 3 ASSESSMENT 2 106
1 3 SPECIAL PEST. REVIEW 102
1 1 HEALTH & ENV. REVIEW 84
1 1 EXPOSURE EVALUATION 81
LEGEND

AA FOR PESTICIDES & TOXIC SUBSTANCES

PFT + PPT

TYPE POSITION	PEST. & TOXIC ENFORCEMENT	PESTICIDES PROGRAM	TOXIC SUBSTANCES	IMMEDIATE OFFICE
SAFETY				
SECURITY				
CIVIL RIGHTS			1	
PERSONNEL MGMT.				
GENERAL ADMN.		23	10	2
FACILITIES & SERV.		3	1	1
COMPUTER		15	13	
ADMN. OFFICER		3	7	
MGMT. ANALYST		6	3	3
PROGRAM MGMT.	1	22	20	9
FINANCIAL MGMT.		7		
PUBLIC INFO.				2
TV/GRAPHIC ARTS				
WRITER/EDITOR		11	9	6
CONTRACTS				
LIBRARY			4	
TOTAL:	1	90	68	23

Note: General clerical not included.

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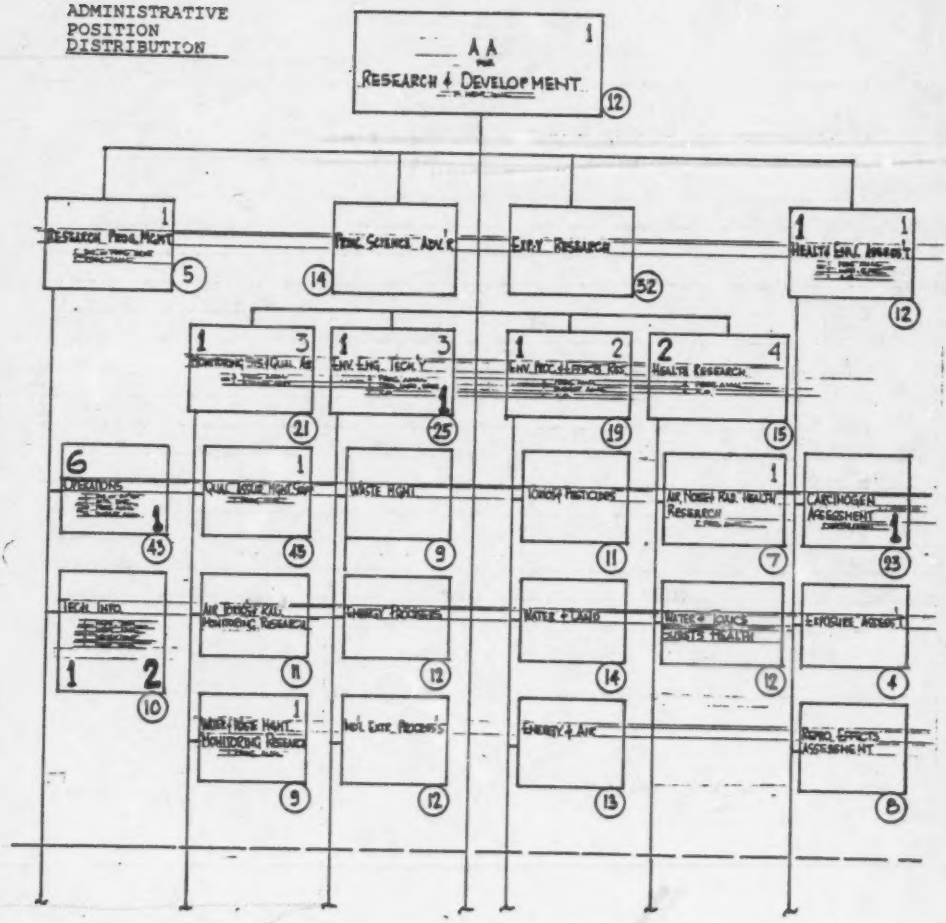
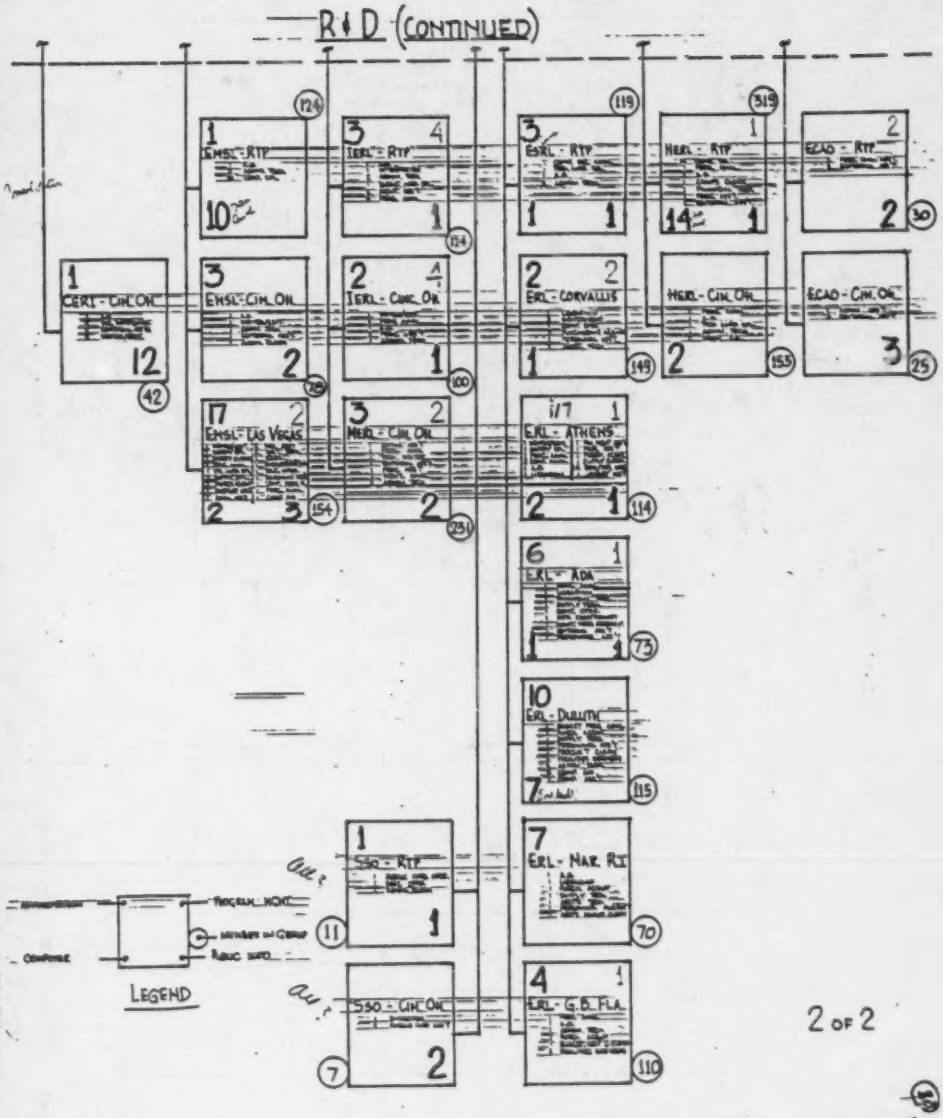
ADMINISTRATIVE
POSITION
DISTRIBUTION



1 of 2

27


R & D (CONTINUED)
EMSL - RTP
IERL - RTP
ESRL - RTP
HERL - RTP
ECAO - RTP
CERI - CIN. OH.
EMSL - CIN. OH.
IERL - CINC. OH.
ERL - CORVALLIS
HERL - CIN. OH.
ECAO - CIN. OH.
EMSL - LAS VEGAS
HERL - CIN. OH.
ERL - ATHENS
ERL - ADA
ERL - DULUTH
SSO - RTP
ERL - NAR. RI
SSO - CIN. OH.
ERL - G.B. FLA.
LEGEND

2 OF 2

AA FOR RESEARCH & DEVELOPMENT

PFT + PPT

TYPE POSITION	MONIT. SYS. & QUAL. ASSESS.	ENV. ENG'G. & TECHNOLOGY	ENV. PROC. & EFFECTS	HEALTH RESEARCH	PROGRAM MGMT.	HEALTH & ENV. ASSESSMENT	IMMEDIATE OFFICE
SAFETY							
SECURITY							
CIVIL RIGHTS							
PERSONNEL MGMT.							
GENERAL ADMN.			1	1	3	1	
FACILITIES & SERV.							1
COMPUTER	1				1		
ADMN. OFFICER	1	1	1	1		1	
MGMT. ANALYST					6		1
PROGRAM MGMT.	4	3	2	5	13	1	1
FINANCIAL MGMT.					5		
PUBLIC INFO.							
TV/GRAPHIC ARTS							
WRITER/EDITOR					1	1	
CONTRACTS							
LIBRARY							
TOTAL:	6	4	4	7	29	4	3

Note: General clerical not included.

ADMINISTRATIVE SUPPORT - CINCINNATI

(Less Computer, Writer/Editor, & Public Infor.)

LAB	TOTAL STAFF	ADMN. STAFF PFT & PPT	PERCENT	ADMN. STAFF (INCLUDES CLERICAL)	PERCENT
HERL - CIN	121	4	3.3%	7	5 %
IERL - CIN	85	6	7.0%	13	15 %
MERL - CIN	176	7	4.0%	8	4.5%
EMSL - CIN	85	4	4.7%	4	4.7%
ECAO - CIN	15	1	6.0%	8	53 %
CERI - CIN	30	2	6.0%	14	47 %
SSO - CIN	5	3	60 %	3	60 %
OA-CONTRACTS		(27x.55) 14.8		(35x.55) 17.5	
OA-PERSONNEL		(16x.90) 14.4		(17x.90) 15.3	
OA-GEN ADMN.		(30x.90) 27		(35x.90) 31.5	
RM-FINANCE		(18x.55) 10		(19x.55) 10.5	
TOTAL:	517	114.2	22 %	132	25.5%

ADMINISTRATIVE SUPPORT - RTP

(Less Computer, Writer/Editor, and Public Info.)

LAB	TOTAL	ADMN. STAFF	PERCENT	ADMN. STAFF (Includes Clerical)	PERCENT
HERL - RTP	236	9	3.8%	14	5.9%
IERL - RTP	89	8	9.0%	15	16.8%
EMSL - RTP	114	3	2.6%	15	13.0%
ECAO - RTP	19	1	5.2%	8	42.0%
ESRL - RTP	101	6	5.9%	5	5.0%
SSO - RTP	9	3	33.0%	5	55.0%
OA - CONTRACTS		(54x.65) 32.4		(56x.65) 36	
OA - PERSONNEL		(24x.68) 16.3		(25x.68) 17	
OA - GEN ADMN.		(47x.68) 32		(49x.68) 33	
RM - FINANCE		(23x.65) 15		(25x.65) 16.25	
TOTAL:	568	125.7	22 %	164.25	30 %
OAQPS	281	12	4.3%	22	7.8%
OA - CONTRACTS		(54x.30) 16.2		(56x.30) 16.8	
OA - PERSONNEL		(24x.10) 2.4		(25x.10) 2.5	
OA - GEN ADMN.		(47x.10) 4.7		(49x.10) 4.9	
RM - FINANCE		(23x.30) 6.9		(24x.30) 7.2	
TOTAL:	281	42.2	15 %	53.4	18 %

ADMINISTRATIVE SUPPORT - LABORATORIES

TYPE POSITION	HERL-CIN (121)	IERL-CIN (85)	MERL-CIN (176)	EMSL-CIN (85)	ECAO-CIN (15)	CERI-CIN (30)	NTOTC-CIN (20)	TSD-CIN (26)	SUPPORT SERV.
ADMINISTRATION									
SAFETY									
PERSONNEL									
FACILITIES SERV.						1		1	
CONTRACTS & PROC.									
COMPUTER	2	1				1		1	
FINANCIAL									
MGMT. ANALYST			1						
LIBRARY									
GENERAL ADMN.	5	11	6	4	8	9	5	1	3
PROGRAM MANAGEMENT									
PROGRAM MGT. SPEC.									
PROGRAM ANALYST	2	2	1					1	
PUBLIC/EXT. AFFAIRS									
PUBLIC INFO.									2
TV/GRAPHIC ARTS						4			
WRITER/EDITOR		3	2	4	6				
TOTAL:	9	14	11	6	12	21	5	4	5

ADMINISTRATIVE SUPPORT - LABORATORIES

TYPE POSITION	HERL-RTP (236)	IERL-RTP (89)	EMSL-RTP (114)	ECAO-RTP (19)	ESRL-RSP (101)	AQPS-RTP (281)	SSO-RTP
ADMINISTRATION							
SAFETY							
PERSONNEL							
FACILITIES SERVICE	1						
CONTRACTS & PROC.							
COMPUTER	17		11		2	12	
FINANCIAL	1						
MGMT. ANALYST	1	2					
LIBRARY							
GENERAL AMDN.	10	9	4	5	5	19	4
PROGRAM MANAGEMENT							
PROGRAM MGMT. SPEC.							
PROGRAM ANALYST	1	4		1		3	
PUBLIC/EXTERNAL AFFAIRS							
PUBLIC INFO.	1						1
TV/GRAPHIC ARTS							
WRITER/EDITOR	2			3			
TOTAL:	34	15	15	9	7	34	5

ADMINISTRATIVE SUPPORT - LABORATORIES

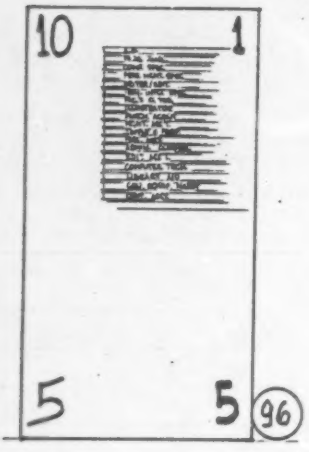
TYPE POSITION	ATHENS (77)	ADA (52)	CORVALLIS (96)	DULUTH (98)	NARR. (59)	GULF BR. (63)	EMSL - LV (148)
ADMINISTRATION							
SAFETY	1						2
PERSONNEL	1	1	1	1	1		
FACILITIES SERV.	6	3	1	6	2	5	4
CONTRACTS & PROC.	1		3	3	1	1	3
COMPUTER	5	1	2	1			5
FINANCIAL	1	1	2	1	4	1	4
MGMT. ANALYST							1
LIBRARY	2	3	1	1	1		
GENERAL ADMIN.	4	2	4	3	4	5	8
PROGRAM MANAGEMENT							
PROG. MGMT. SPEC.							
PROGRAM ANALYST	1	1	1			2	3
PUBLIC/EXTERNAL AFF.							
PUBLIC INFO.							
TV/GRAPHIC ARTS							1
WRITER/EDITOR	1		2	2			1
TOTAL:	23	12	17	18	13	14	32

ADMINISTRATIVE/MANAGEMENT POSITIONS
ORD OTHER THAN HEADQUARTERS
PFT + PPT

DESIGNATION	TOTAL	ADMN. MGT.	PERCENT
EMSL - RTP	114	12	10.5%
IERL - RTP	86	6	6.9%
ESRL - RTP	101	3	2.9%
HERL - RTP	236	26	11.0%
ECAO - RTP	19	4	21.0%
SSO - RTP	8	3	37.5%
EMSL - CIN	85	4	4.7%
IERL - CIN	85	7	8.2%
MERL - CIN	176	10	5.6%
HERL - CIN	121	7	5.7%
CERI - CIN	30	13	43.3%
ECAO - CIN	19	4	21.0%
SSO - CIN	5	1	20.0%
EMSL - LV	148	27	18.2%
ERL - CORV	96	11	11.4%
ERL - ATHENS	77	19	24.6%
ERL - ADA	52	7	13.4%
ERL - DULUTH	98	17	17.3%
ERL - NARR	59	7	11.8%
ERL - GULF BREEZE	63	14	22.2%
TOTAL:	1,678	202	12.0%

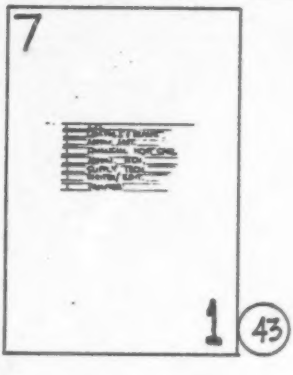
Note: General clerical not included.

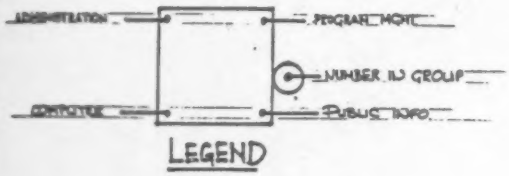
NEIC - DENVER



ANN ARBOR

MONTGOMERY





LEGEND

35

REGIONS

REGION	PUBLIC/EXTERNAL AFFAIRS	OCR	PROGRAM MANAGEMENT OPERATIONS	PROGRAM MANAGEMENT
I - BOS	6	5	3	4
II - NY	8	8	1	1
III - PHI	9	6	1	1
IV - ATL	9	6	11	14
V - CHI	10	5	16	10
VI - DAL	10	6	8	4
VII - KC	10	2	4	2
VIII - DEN	6	5	1	2
IX - SF	3	1	5	0
X - SEA	5	4	4	2

REGIONS

REGION	MANAGEMENT DIVISION								
	I.O.	PERS.	FAC'S. LIB.	CONT.	FIN.	ADP	TOTAL	TOTAL REG'L.	RATIO
I - BOS	6	8	4	4	10	6	38	406	10.7
II - NY	8	9	7	6	9	11	50	525	10.5
III - PHI	6	12	7	2	9	14	50	553	11.1
IV - ATL	1	12	10	2	11	6	42	639	15.2
V - CHI	7	13	12	4	19	12	67	818	12.2
VI - DAL	3	10	6	3	21	8	51	481	9.4
VII - KC	3	8	7	3	12	8	41	379	9.2
VIII - DEN	7	9	8	3	8	5	40	373	9.3
IX - SF	9	8	9	2	13	2	43	384	8.9
X - SEA	7	6	10	2	7	6	38	315	8.3
TOTAL:	57	95	80	31	119	78	460	4,873	10.6

CLERICAL SUPPORT

PFT's

SECRETARIES		1,030		
CLERK-TYPIST		252		
CLERK-STENO		45		
MISC. CLERICAL		191		
	TOTAL:	1,591	=	14.4%

DOE	=	14.0%
STATE	=	19.4%
NASA	=	9.8%
HUD	=	14.3%

CLERICAL AND BY AA

(Miscellaneous Clerical, Series 303 - Not Included)

AA	TOTAL STAFF	TOTAL CLERICAL	PERCENT	# SUPPORTED PER CLERICAL
ADMINISTRATOR	630	95	15%	6.63
ASSOC. ADMINISTRATOR	587	114	19%	5.15
ADMINISTRATION	1,134	152	13%	7.46
AA FOR WATER	786	143	18%	5.49
AA FOR SW & ER	312	48	15%	6.50
AA FOR AIR, NOISE AND RAD	1,126	174	15%	6.47
AA FOR PESTICIDES AND TOXICS	1,361	223	16%	6.10
AA FOR R & D	2,420	355	15%	6.81
REGIONS	5,119	793	15%	6.45
TOTAL:	13,475	2,097	15.5%	6.42

Note: Total PFT and .8 OPFT.

ADMINISTRATIVE/MANAGEMENT STAFFING GUIDELINES

Based on an analysis of the data developed in the preceding study and model guideline recommendations from the Assistant Administrators staffs, staffing guidelines for administrative/management positions were developed. The guidelines cover positions in the Immediate Office of the Assistant Administrator, the Offices and the Divisions.

The following assumptions were made in developing the guidelines:

1. DOES NOT INCLUDE POLICY ANALYSIS, COMPUTER SPECIALIST POSITIONS, OR POSITIONS INVOLVING PROGRAM MANAGEMENT.

2. CURRENT SUPPORT FROM AA FOR ADMINISTRATOR REMAINS SAME.

3. WORKLOAD PROPORTIONAL TO SIZE OF AA.

4. BUDGET DECISION-MAKING SHOULD BE CENTRALIZED AT HIGHEST LEVEL POSSIBLE.

5. BUDGET PREPARATION SHOULD BE AT OFFICE LEVEL.

6. ADMINISTRATIVE MANAGEMENT (i.e., Personnel, Procurement) SHOULD BE CENTRALIZED TO THE FULLEST EXTENT POSSIBLE.

The guidelines contain two sections. Section I the "basic" staffing guidelines identify minimum staffing levels based on the number of FTE's employed in the immediate Office of the AA, the Offices and the Divisions. Section II contains additional staffing Factors A thru E which should be used to supplement the basic guidelines. Appendix A contains a brief description of the duties typically performed by employees in the positions covered by the guidelines. The duties identified are intended for general guidance only and should not be considered all inclusive.

ADMINISTRATIVE/MANAGEMENT STAFFING GUIDELINES

AA - IMMEDIATE OFFICE

(All Positions are FTE's)

SIZE IN FTE's	DIRECTOR PROG. OP's.	ADMN. OFFICER	ADMN. TECH.	BUDG. ANAL.	PROG. ANAL.	BUDG. TECH.	TOTAL FTE's
0-350	1	1	-	1	1	-	4
351-550	1	1	.5	1	1	.5	5
551-750	1	1	.5	2	1	.5	6
751-950	1	1	1	2	1	1	7
951-1150	1	1	1	2	2	1	8
1151-1350	1	1	1.5	2	2	1.5	9
1351-1550	1	1	1.5	2.5	2	1.5	9.5
1551-1750	1	1	1.5	3	2	1.5	10
1751-1950	1	1	2	3	2	2	11
1951-2150	1	1	2	3	2	2	11
2151-2350	1	1	2.5	3	2	2.5	12
2351-2550	1	1	2.5	3	2	2.5	12

94-034 O - 82 - 12

SECTION I

ADMINISTRATIVE/MANAGEMENT STAFFING GUIDELINES

-OFFICE-

(All Positions are FTE's)

SIZE IN FTE's	ADMN. OFFICER	ADMN. TECH.	BUDG/PROG. ANAL.	BUDGET TECH.	TOTAL FTE's
0-100	1	-	1	-	2
101-200	1	-	2	1	4
201-300	1	-	2	1.5	4.5
301-400	1	1	2.5	2	6.5
401-500	1	1	3	2.5	7.5
501-600	1	1	3	2.5	7.5
601-700	1	1	3.5	3	8.5
701-850	1	1	3.5	3	8.5

SECTION I

ADMINISTRATIVE/MANAGEMENT STAFFING GUIDELINES

-DIVISION-

(All Positions are FTE's)

SIZE IN FTE's	ADMN. OFFICER	ADMN. TECH.	BUDGET TECH.	TOTAL FTE's
0-25	-	-	-	-
26-50	-	.5	-	.5
51-75	1	-	-	1
76-100	1	-	-	1
101-150	1	.5	-	1.5
151-200	1	1	-	2
201-250	1	1	-	2
251-300	1	1	.5	2.5
301-350	1	1	.5	2.5

SECTION II

FACTOR A

COMPLEXITY OF ORGANIZATION

ORGANIZATION		FACTOR (FTE's)
AA	EXCEPTIONALLY COMPLEX	1
	MODERATELY COMPLEX	.5
OFFICE	EXCEPTIONAL COMPLEX	1
	MODERATELY COMPLEX	.5

DEFINITION:

Exceptionally Complex: Organizational structure required necessitates large number of offices and divisions (25-50) at AA level and large number of division (10-15) at office level.

Moderately Complex: Organizational structure required necessitates moderate number of offices and divisions (15-24) at AA level and moderate number of divisions (5-10) at office level.

SECTION II

FACTOR B

STABILITY OF ORGANIZATION

ORGANIZATION		FACTOR (FTE's)
AA	EXCEPTIONALLY UNSTABLE	2
	MODERATELY UNSTABLE	1
OFFICE	EXCEPTIONALLY UNSTABLE	1
	MODERATELY UNSTABLE	.5

DEFINITION:

Exceptionally Unstable: Organization characterized by an unusual amount of change due to one or more of the following: reorganization, changes in technology, legislative initiatives.

Moderately Unstable: Organization characterized by an above average amount of change due to one or more of the following: reorganization, changes in technology, legislative initiatives.

SECTION II

FACTOR C

DISPERSION OF WORKFORCE

ORGANIZATION		FACTOR (FTE's)
AA	EXCEPTIONALLY DISPERSED OFFICES	1
	MODERATELY DISPERSED OFFICES	.5
OFFICE	EXCEPTIONALLY DISPERSED DIVISIONS	1
	MODERATELY DISPERSED DIVISIONS	.5

DEFINITION:

Exceptionally Dispersed: Workforce characterized by wide-scale geographic dispersion. At AA level, 5 or more offices, divisions, or equivalent are located in the field. At office level, 5 or more divisions are in the field.

Moderately Dispersed: Workforce characterized by a moderate degree of geographic dispersion. At AA level, 1-4 offices, divisions or equivalent are located in the field. At office level, 1-4 divisions are in the field.

SECTION II

FACTOR D

MISSION WITH EXCEPTIONAL DEMAND

ORGANIZATION		FACTOR (FTE's)
AA	MISSION WITH EXCEPTIONAL DEMAND	1
	MISSION WITH MODERATE DEMAND	.5
OFFICE	MISSION WITH EXCEPTIONAL DEMAND	1
	MISSION WITH MODERATE DEMAND	.5

DEFINITION:

Exceptional Demand: Mission tasked with crash programs of exceptional difficulty which are characterized by considerable public interest, Congressional mandate and requirements for state of technology, e.g. superfund.

Moderate Demand: Mission tasked with significant crash program(s) which are characterized by considerable public interest, Congressional mandate and requirements for state of the art technology, e.g. Love Canal.

FACTOR E

COMPLEXITY OF BUDGET

ORGANIZATION		FACTOR P (FTE's)
AA	EXCEPTIONALLY COMPLEX BUDGET	1
	MODERATELY COMPLEX BUDGET	.5
OFFICE	EXCEPTIONALLY COMPLEX BUDGET	1
	MODERATELY COMPLEX BUDGET	.5

DEFINITION:

Exceptionally Complex Budget:

Characterized by three or more of the following:

1. Three or more appropriations.
2. Three or more media.
3. Two or more program elements in the media.
4. Three or more allowance holders.
5. Each allowance is subdivided because of geographic location or organizational complexity into suballowances or responsibility centers.
6. Planning is characterized by numerous major reprogramming actions per year.

Moderately Complex Budget: Characterized by three or more of the following:

1. Two or more appropriations.
2. Two or more allowance holders.
3. Each allowance is subdivided because of geographic or organizational problems into several suballowances or responsibility centers.
4. Planning is characterized by several reprogramming actions per year.

ADMINISTRATIVE/MANAGEMENT STAFFING GUIDELINES

Types of Positions Covered by Guidelines

POSITION	DUTIES
Director, Program Operations Officer (Program Anal. Officer or Budget Officer).	Directs all budget/fiscal management evaluations and administrative support for AA.
Administrative Officer	Provides a wide variety of administrative services to staff offices which support AA.
Administrative Technician	Provides administrative support in personnel, property management, payroll, etc.
Budget/Program Analyst	Participates in analysis and evaluation of program planning and budgeting activities.
Budget Technician	Provides assistance in preparation of financial reports/documents and financial control.
*Correspondence Clerk	Control correspondence and "FOIA" requests.

*These positions are not included in the guidelines since the manner in which the correspondence control and FOIA process are handled differ constantly between AAs. It is estimated, however, that each AA would need a minimum of two positions if the function is centralized in the immediate office of the AA.

APPENDIX A

Insert for the Transcript
October 22, 1981
R&D Posture Hearing

Item 2 (p. 23, line 560):

What functions are performed by the 71 full-time employees in ORD headquarters who are SES or GS-15 level, what positions do they occupy; and why are they located in Washington, D.C.? Why is this a problem? What are the differences between the functions performed at ORD headquarters and the EPA laboratories?

Response:

The 71 permanent full time employees in ORD headquarters who are SES or GS-15 level and above are engaged in program planning and in directing and coordinating ORD's activities. The employees perform a variety of administrative and managerial functions, including developing operating guidance for the ORD organizations, allocating resources, monitoring progress toward specific program goals, and generally overseeing ORD operations. Further, these employees interact with and represent ORD to Congress, to the Office of Management and Budget (OMB), to other Agency offices, and to Agency management. Attached is a list of the 71 permanent full time positions that are SES or GS-15 level and above.

The employees are located in Washington, D.C. in order to provide a focal point for the direction and coordination of a program that is nation-wide in scope, encompassing approximately 1,600 employees in 14 major laboratories and to provide timely responses to Congress, OMB, and other Agency offices and management, which are located almost exclusively in Washington.

An Agency Task Force is now performing a detailed study of ORD, looking especially at the functions of Senior Managers in headquarters. The goal of the study is to produce a rational reorganization plan for ORD which will enable it to be responsive to EPA's needs with the minimum number of headquarters personnel. Grade structure will be analyzed to minimize management layering, clarify lines of communication, and enhance accountability.

The major difference in the functions performed in headquarters as opposed to in the laboratories is that headquarters primarily performs the management, oversight, and liaison functions, whereas the laboratories carry out the actual research work, either by conducting the in-house research or by acting as project officers for the extramural programs.

Appendix B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 18 1981

THE ADMINISTRATOR

MEMORANDUM

TO: Associate Administrators
Assistant Administrators
Regional Administrators
Staff Office Directors

SUBJECT: EPA Peer and Administrative Review Control System

As you undoubtedly know, since April EPA has been in compliance with a governmentwide moratorium on the production of written and audiovisual informational materials. The temporary suspension has allowed us to reevaluate the kinds of materials that are being produced by the Agency. This memorandum presents the Agency's policy on production and distribution of printed and audiovisual materials. With new peer review and budgetary controls we assure that all Agency materials are result-oriented, cost-effective, consistent with Administration policy, and are based on the best scientific and technical evidence available. This system must be implemented by January 18, 1982. The present printing moratorium will continue in effect until that time.

Materials Subject to Review

Henceforth, any scientific or informational material attributable in any way to EPA and prepared by an EPA employee, consultant, contractor or grantee for distribution outside the Agency must be reviewed and approved through our control system. Furthermore, any material prepared for distribution to anyone outside the agency is considered a "public" informational product.

The policies delineated in this memorandum apply to all informational products developed and produced by EPA except for the following.

- Congressional testimony
- verbatim testimony from hearings
- advance Notices of Proposed Rulemakings (ANPRM's), proposed or final regulations subject to a formal comment period
- press releases approved by the Office of Public Affairs within the Office of the Administrator
- legal opinions, briefs, or memoranda, including initial, final or other decisions in quasi-judicial administrative hearings
- Federal Register notices

- notices of public hearings
- Request for Proposal's
- criteria documents or other similar documents subject to a formal public comment period or review by the Science Advisory Board or the Science Advisory Panel
- advisory committee statements and reports
- materials generated on an employee's own time using private facilities and printed with the standard disclaimer
- internal policy statements and memoranda; and
- official Agency correspondence

I expect each of you to consider carefully the essential need for a product before you begin it. The extent to which EPA produces informational materials will be determined by Agencywide priorities and the availability of resources. Any informational material developed by EPA, other than those specifically exempted above, must fit into one of the following categories:

- mandated materials
- regulatory and enforcement baseline materials
- regulatory and enforcement compliance materials
- scientific and technical materials
- informative and educational materials

Attachment A provides detailed descriptions of each category along with guidance for production and distribution.

In addition, "major" products must be reviewed by my Science Advisor and/or by the Office of Public Affairs. If a product of any cost contains significant scientific or technical uncertainties, it becomes a "major" document subject to review by the Science Advisor or his designated representatives. If a product fits into any of the following criteria, it becomes a "major" document subject to review by the Office of Public Affairs:

- any material of any cost that has policy implications. The Associate Administrator, Assistant Administrator, Regional Administrator, or Staff Office Director within the Office of the Administrator in whose program, region or office the document originates is responsible for determining if a report has policy implications;

- any product from a project funded at $50,000 or more;

- any single product that costs $10,000 or more to print;

- any category or series of reports that costs $25,000 or more a year to print;

- any periodical as defined by OMB Circular A-3

If a product does not require review by either the Science Advisor or Office of Public Affairs, you are accountable for adequate peer review and cost control.

Review Requirements

This Agency has never had a uniform requirement to assure quality in its informational materials. I believe this has been a serious deficiency which has caused many of the inconsistencies that were so characteristic of Agency issuances in the past. As you know, Dr. John Hernandez has personally undertaken the enormous task of developing an Agencywide review process, which is an integral part of the overall control system. A copy of this order is attached (Attachment B).

Budgetary Requirements

To control production and printing costs I have asked Dr. John Horton, Assistant Administrator for Administration, to oversee the establishment of printing ceilings for each Associate Administrator, Assistant Administrator, Regional Administrator and Staff Office Director. These ceilings will be based on a 30% reduction in the printing object class amounts established in President Reagan's budget for FY'82 as submitted to Congress.

Existing Inventories

Inventories will also be controlled. Each of you is responsible for eliminating outdated materials and excessive numbers of copies from your existing inventories. As a first step:

Review all public information materials published by your program or office prior to 1979 and make available to the Director, OPA, for approval a list of those you wish to continue distributing.

I have asked Byron Nelson, Director of Public Affairs, to undertake a review of all materials prepared in conjunction with the former Office of Public Awareness and, based on that review, to determine which of those materials the Agency will continue to make available to the public.

In addition, I have asked Dr. Horton to centralize the Agency's warehousing and distribution of publications. The target date for completion of this process is October 1, 1982.

FY'82 Information Plans

The Office of Public Affairs will be charged with coordinating the new system. At the beginning of each fiscal year a public information strategy plan for all proposed products must be submitted to OPA. This plan must include product title; report category and justification if required; quantity and estimated cost of printing; and means of and estimated cost of distribution. All proposed products and cost estimates must be approved by the Associate Administrator, Assistant Administrator, Regional Administrator, or Staff Office Director prior to submittal.

Each of you should designate an individual in your immediate office to work with OPA so that the prescribed changes are implemented smoothly and quickly. Please let Joan Wolfe, Special Assistant to the Director, Office of Public Affairs, know the name of your designee by January 15, 1982. Mrs. Wolfe can be reached at 755-0700.

Anne M. Gorsuch

Attachment (A)

Categories of Informational Material

Every product attributable in any way to EPA and prepared by an EPA employee, consultant, contractor, or grantee must be identified by category, as-defined below, and follow the review and approval procedures described.

(1) Mandated Materials--Materials specifically required by legislation, court order, Executive order or international agreements. This category includes both reports to Congress and Congressionally mandated publications developed for broader audiences. Mandated materials will be printed in quantities sufficient to meet specific requirements to accomplish the objectives stated. Justification for these materials must cite either (1) law and section, (2) international agreement and country or organization, or (3) Congressional Committee.

A requirement to produce a particular document or carry out an information activity does not necessarily imply free distribution of the produced materials. Full consideration must be given to the use of the Government Printing Office (GPO), National Technical Information Service (NTIS), and the Federal Register for information dissemination.

(2) Regulatory and Enforcement Baseline Materials--Those reports and assembled data which form the basis for existing and proposed regulations and enforcement policies. This category includes scientific, technical, economic and policy analysis documents from which the Agency has derived its regulatory or enforcement position with respect to an environmental pollution control issue.

Regulatory and Enforcement Baseline Materials must be made available to the regulated industries and state agencies to permit them to fully understand the basis for EPA's activities. To the maximum extent possible this should be accomplished by making the information available for review at EPA Regional and State Environmental offices. Scientific and technical documents not otherwise readily available must be placed in NTIS. Specific justification will be required for reports in this category to be printed and distributed to the public.

(3) Regulatory and Enforcement Compliance Materials--The reports and other materials which are necessary to enable regulated entities to comply with EPA regulatory and enforcement requirements. This category includes explanatory documents and suggested management and technical alternatives to achieve compliance. Also included are those documents which assist State and local governments in implementation of EPA regulations.

Regulatory and Enforcement Compliance Materials are essential to regulators and to the regulated industries since they define the regulations themselves, provide Agency position papers and identify possible compliance alternatives. Distribution of materials in this category may be directed or handled on a request basis dependent upon their relative cost-effectiveness. These reports must be coordinated with all organizational components of EPA which may be able to contribute information on applicable regulatory or enforcement policy, management or technical alternatives, scientific data or economic effects.

(4) Scientific and Technical Materials--Those materials which document the scientific and technical activities of the Agency. Although this category is primarily made up of reports from the Office of Research and Development, EPA Program Offices also conduct and/or fund scientific and technical studies which must be properly documented.

Scientific and Technical Materials include Agency sponsored or authored journal articles and papers presented at technical meetings as well as reports documenting Agency studies. In general, the results of the Agency's scientific and technical studies will be made available to the public through NTIS. Copy quantities sufficient for internal Agency use can usually be obtained from Agency duplicating facilities. Results of Agency scientific and technical studies can be disseminated through specifically formatted summaries of the study report. In most cases, summaries only will be printed and distributed by EPA to provide a cost-effective method of notifying the technical public of the availability of the complete reports from NTIS.

(5) Informative and Educational Materials--Those information products which are necessary to inform the public sector of past, present or future EPA activities. This category includes materials (both printed and audiovisual) which are directed to broad audiences, i.e., beyond a single regulated community, and materials which describe environmental issues for general audiences. All products in this category must be approved by OPA before their development is initiated.

ENVIRONMENTAL PROTECTION AGENCY **ORDER** 2200.

PUBLICATIONS AND COMMUNICATIONS MATERIALS - GENERAL

REVIEW PROCESS FOR SCIENTIFIC, INFORMATIONAL AND EDUCATIONAL DOCUMENTS

1. PURPOSE.

a. This Order establishes Agency policy on reviewing scientific, informational or educational materials. The purpose of this review process is to protect the technical and scientific quality of these types of public materials distributed by the Environmental Protection Agency, and ensure that they are based on the best scientific and technical evidence available. Such a review process will further engender the respect and recognition deserved by Agency scientists and staff.

b. The process will provide a clearly defined route for the expeditious review and approval of the publications before their public release. The goal is to establish Agency responsibility for literature published in its name and by its employees when they are acting in an official capacity. This document will not be construed as constituting any suggestion of constraints on the free expression of Agency employees.

c. This Order is intended to supplement other applicable guidelines and recommendations, and supersedes other directives only to the extent that it is inconsistent with them. Any program area or office may adopt procedures consistent with this Order to meet its specific needs.

2. DOCUMENTS SUBJECT TO REVIEW.

a. The review process described in Paragraph 5 is applicable to all scientific, informational, or educational publications, designed for public distribution and created by an EPA employee, contractor, grantee or consultant with the exceptions of:

(1) Congressional testimony;

(2) verbatim testimony from hearings;

(3) Advance Notices of Proposed Rulemakings (ANPRM's), proposed or final regulations subject to a formal comment period;

(4) press releases approved by the Office of Public Affairs within the Office of the Administrator;

(5) legal opinions, briefs or memoranda, including initial, final, or other decisions in quasi-judicial administrative proceedings;

(6) Federal Register Notices;

(7) Notices of Public Hearings;

(8) Request for Proposals;

(9) publications by EPA employees proposed for scientific journals which incorporate peer review (inclusion of a disclaimer statement is appropriate when policy issues are incorporated in the article);

(10) Criteria Documents or other similar documents subject to a formal public comment period or review by the Science Advisory Board or the Science Advisory Panel;

(11) advisory committee statements and reports;

(12) materials generated on an employee's own time using private facilities;

(13) internal policy statements or memoranda; and

(14) official Agency correspondence.

3. APPLICABILITY. These guidelines are applicable to employees acting in an official capacity related to their work for the Agency. They are also applicable to EPA contractors, consultants, and grantees to the extent provided for in their agreement with EPA. Publications by EPA employees are subject to review if they are generated on Agency time or are based on materials derived from EPA supported activities. This Order does not provide for, nor describe, all of the steps in the publication process; it is designed to outline the review procedures. This Order should not be construed to conflict with the disclosure provisions of the Freedom of Information Act.

4. DEFINITIONS.

a. The term "publication" includes all EPA generated materials that may be released in mass to the general public, including:

(1) written statements needed to satisfy a statutory or regulatory requirement;

(2) published or unpublished books, manuals, and research reports;

(3) informational brochures or materials and newsletters or other periodic reports;

(4) publications by EPA employees proposed for outside journals other than those that incorporate peer review;

(5) project reports and other materials filed with the National Technical Information Service (NTIS);

(6) EPA published proceedings resulting from Agency sponsored conferences, workshops, and seminars (papers by non-EPA employees should go through this peer review process or contain an adequate disclaimer);

(7) contributions made to publications by interagency working groups where authorship is to be attributed to EPA or its employees (these publications should go through this peer review process or contain an adequate disclaimer);

(8) audiovisual materials designed to be released to the general public in other than a single presentation; or,

(9) computer software designed for release to the general public.

5. PROCEDURES.

a. Initiation of the Review Process.

(1) The review process is initiated when the author (hereinafter includes authors) submits a publication to his/her immediate supervisor or office director for review, together with recommendations for at least two peer reviewers who should be specialists in the subject. The author may request that a reasonable review schedule be established to ensure timely processing.

(2) The manuscript should be in near-finished form to the satisfaction of the author. Typically, it should be in a double-spaced, typed format with all of the necessary tables, charts, illustrations and figures attached. A designated supervisor evaluates the text and forwards it to, usually, the author's recommended reviewers for scientific and technical review. Reviews may be done simultaneously in order to reduce the time required.

(3) Additional review by other EPA offices and laboratories may be requested by any office through which a publication must pass enroute to its final publication form.

b. Peer Review.

(1) Peer review is designed to identify weak, doubtful, ambiguous or unsupportable statements or conclusions. The peer reviewer is expected to evaluate the manuscript for general content, organization and scope, presentation and quality of data, validity of analytical techniques, soundness of conclusions, and consistency of the text with tables, figures, illustrations and maps.

(2) A reviewer should use marginal notes or interlineations on the draft publication to indicate suggested changes or questions. Where suggestions are numerous or complex, or where more serious questions arise, an attached memorandum is appropriate. Marked-up drafts, and accompanying statements from reviewers, are returned directly to the author unless other directions are provided.

(3) Reviews should be completed in a reasonably prompt fashion. Peer-reviewers and those in the administrative chain should make every attempt to meet the proposed time schedule. A goal would be for review from the office director level up through the Associate, Assistant or Regional Administrator level to be completed within two weeks. Refusal at any level of management to approve a document may be appealed once to the next higher level of management.

c. Redrafting.

(1) The author should make efforts to give thoughtful consideration to and to accommodate the comments provided by reviewers in modifying and redrafting of the text. In preparing a revised draft, acceptable changes and corrections should be incorporated. If only relatively minor differences of opinions on scientific or technical issues exist between the author and reviewers, the author should briefly explain his positions on the revised draft when it is sent out for re-review. The author should also indicate changes that may or may not have been made so as to alert the reviewers of a revised draft.

(2) Where substantial differences or misunderstandings occur, the author should explain his/her views in more formal comments in a memorandum attached to the revised draft of the manuscript. Informal consultation and discussion between reviewers and author are highly desirable in order to clarify points of view and to facilitate agreement when significant differences arise.

(3) The review process is repeated until the author feels that the proposed publication is ready for submission for final administrative and technical review. At this point, statements of concurrence and the signature of the designated peer reviewers should be attached to the text. In cases where the author has not reached a consensus with the reviewers, comments on the nature of their differences, prepared by the reviewers, should be attached to the text and transmitted to subsequent administrative levels for review.

d. Administrative Review.

(1) The prepared publication should then be submitted to the office director level for review. This office is expected to provide final approval for technical and scientific soundness and overall organization and presentation of data.

(2) At this level, or if appropriate at a lower level, a memorandum outlining any expenditures, and sources of funds or priorities, or unusual co[illegible]-tions should be attached. This memo should also include plans for publication, dates, and the anticipated number of copies, as well as the purpose of the publication, the intended audience, a full description of the proposed format (i.e., size, number of pages, design and color) and/or a mockup of the finished product.

(3) The publication and accompanying memorandum then move to the Associate, Assistant or Regional Administrator who has final authority on deciding whether the document is a "major" document which then must be reviewed by the Science Advisor and/or the Office of Public Affairs. In the Office of the Administrator, the office director will have responsibility for the document and make this decision. In some cases, certain documents will be reviewed by both the Science Advisor and the Office of Public Affairs.

(4) All documents which are not "major" should be carefully examined before publication as to their technical and scientific credence and quality. The Associate, Assistant, or Regional Administrator is responsible for these documents with regard to conformity with budgetary and quality guidelines.

e. Review by the Science Advisor

(1) If a document of any cost contains significant scientific or technical uncertainties, it becomes a "major" document subject to review by the Science Advisor or his designated representatives. The Associate, Assistant, or Regional Administrator in whose program, region, or office the document originates, is responsible for determining if the document contains scientific or technical uncertainties. The latter may be determined by examination of peer reviewers' comments and any attachments submitted by the author or reviewers.

(2) The Science Advisor, or his designated representatives, will review the manuscript on behalf of the Administrator. The Science Advisor may send manuscripts related to technical issues to other senior officials in the Agency for additional internal review. Those manuscripts of a complex technical nature may be sent to selected experts outside the Agency for confidential review.

(3) The Science Advisor, or his designate, will review documents for general scientific and technical content, clarity, logic, consistency, soundness of conclusions, organization and scope, presentation and quality of data, validity of analytical techniques and overall conformity with research and publication aims of the Agency. The Science Advisor will develop systems for review, for report of comments to the author, and for notifying program areas of the final decision regarding the publication.

f. Administrative and Technical Review by the Office of Public Affairs

(1) If a document falls into any of the following categories, it is a "major" document subject to review by the Office of Public Affairs:

- any material of any cost that has policy implications. The Associate, Assistant, or Regional Administrator in whose program, region, or office the documents originated, is responsible for determining if a report has policy implications;
- any product from a project funded at $50,000 or more;
- any single product that costs $10,000 or more to print;
- any category or series of reports that costs $25,000 or more a year to print; or,
- any periodical as defined by OMB Circular A-3.

(2) The Director of the Office of Public Affairs, or his designated representatives, will review the manuscript on behalf of the Administrator. The Director of the Office of Public Affairs may send manuscripts related to policy issues to other senior officials in the Agency for additional internal review.

(3) The Office of Public Affairs will review both technical and non-technical information materials for conformity with EPA's Public Information Policy and Graphics Standards System. The Office of Public Affairs will oversee the entire publication and printing system for major documents of the Agency to ensure consistency and to avoid duplication. The Office of Public Affairs will also be responsible for approving the mechanical matters of distribution, manner of printed presentation, conformity to budget requirements, and overall consistency with Agency goals. The Office of Public Affairs will develop systems for review, for report of comments to the author, and for notifying program areas of the final decision regarding the publication.

g. Approval and Publication Process

(1) The final manuscript, if approved by the Associate, Assistant, or Regional Administrator is returned to the author for appropriate distribution or publication. "Major" documents must be approved by the Science Advisor and/or the Office of Public Affairs prior to publication. Following such approval, each administrative office that participated in the review process will be notified of the action. The author is responsible for ensuring publication and distribution in accordance with guidelines established by the Office of Public Affairs.

(2) Papers prepared for publication for outside journals are returned to the author after appropriate approval. Each administrative office that participated in the review process will be notified of this action. The author is responsible for mailing the text to the outside journal and for supplying appropriate offices in the Agency with depository copies. At this point, the paper may be distributed by the author to the general public.

(3) In the event of an unfavorable review by OPA and/or the Science Advisor, the manuscript is returned to the originating office or the author as is appropriate. All comments should be addressed and necessary revisions made.

h. Products of External Contracts and Grants.

(1) EPA encourages the independent publication of the results of its contract and grant research in appropriate scientific journals as an important method of recording and reporting scientific information. Any journal article so published must, however, contain the following statement:

> "Although the research described in this article has been funded wholly or in part by the United States Environmental Protection Agency through contract or grant (number) to (name), it has not been subjected to the Agency's required peer and policy review and therefore does not necessarily reflect the views of the Agency and no official endorsement should be inferred."

(2) When an author receiving a contract or grant from EPA sends out a paper for publication, a courtesy copy should also be sent to the EPA Project Officer who will forward it to the appropriate Office Director, Associate, Assistant, or Regional Administrator, and the Science Advisor. Following publication, copies of the journal paper should be submitted to addressees in quantities as may be directed by the Project Officer. Provisions to ensure EPA receipt of journal papers by contractors or grantees should be included in research agreements.

ORDER	2200.

(3) Informational materials, reports, and other products produced under an EPA contract, grant, or cooperative agreement should go through a comparable system of review prior to their release to the public as an EPA publication or product. The Project Officer is responsible for insuring that adequate EPA review consistent with the rights and data clauses of EPA contracts, grants or cooperative agreements is conducted, including approvals by appropriate Associate, Assistant, or Regional Administrators and the Science Advisor and/or Office of Public Affairs, if necessary. Grant officers developing grants which involve public information/public participation activities should encourage the use of cooperative agreements which enable EPA to require the grantees to submit their material for review and/or approval prior to its completion and distribution.

Anne M. Gorsuch
Administrator 12/23/81

Appendix C

DELEGATION SNAPSHOT OF EPA PROGRAMS

PROGRAM EVALUATION DIVISION
AUGUST, 1981

THESE MATERIALS DEPICT THE STATUS OF EPA's DELEGATED PROGRAMS AS OF JULY 1, 1981. THE STATUS IS DESCRIBED AS:

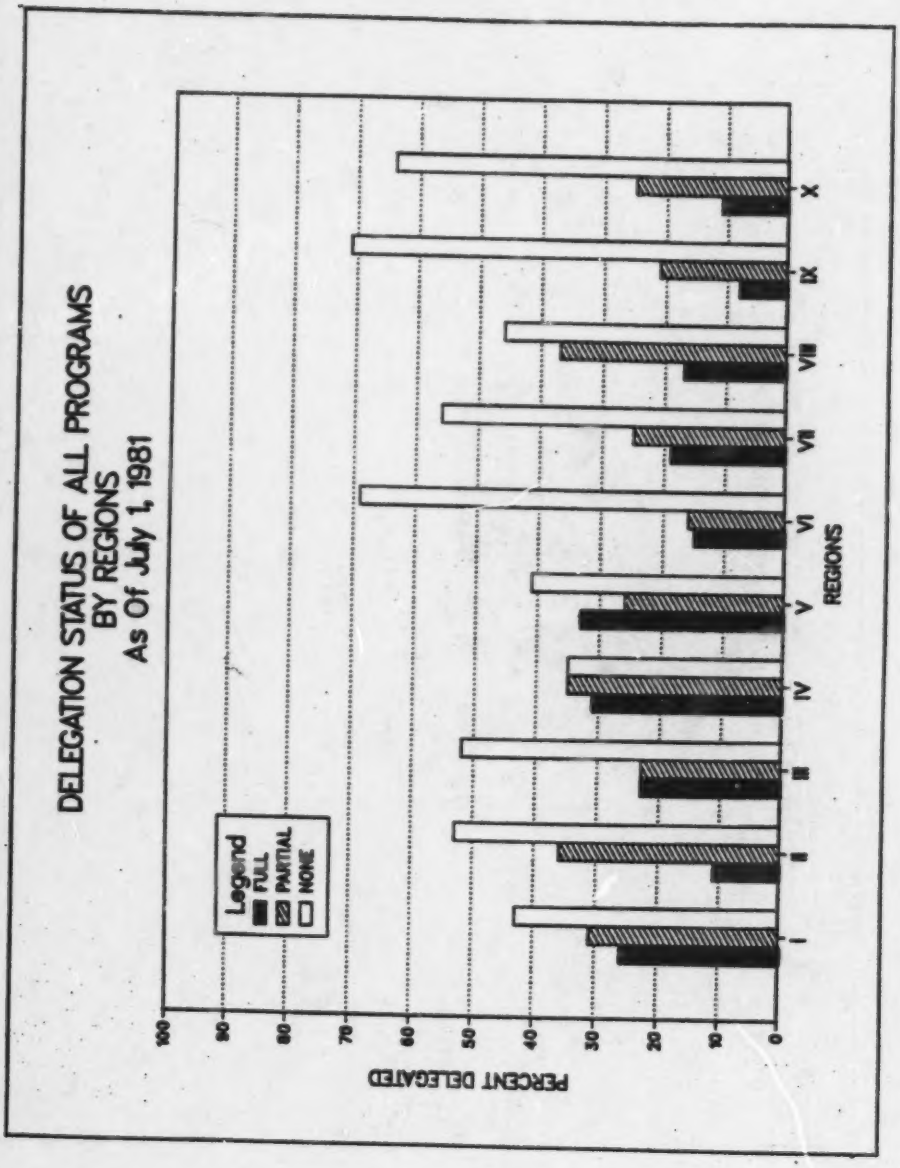
- o FULLY DELEGATED: THE STATE OPERATES THE PROGRAM WITH THE MAXIMUM INDEPENDENCE PROVIDED BY LAW.

- o PARTIALLY DELEGATED: THE STATE PERFORMS SOME, BUT NOT ALL, OF THE ACTIVITIES POSSIBLE UNDER DELEGATION.

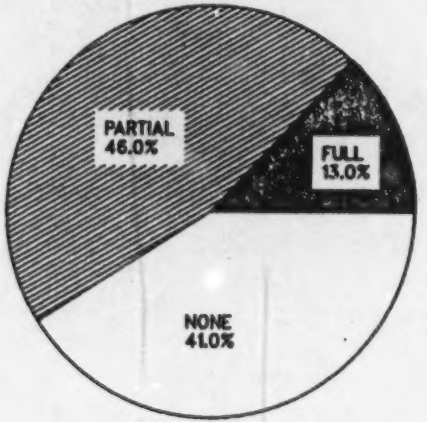
- o NOT DELEGATED: THE STATE PERFORMS NONE OF THE ACTIVITIES POSSIBLE UNDER DELEGATION WITHOUT EPA CONTROL.

THE INFORMATION WAS COLLECTED FROM HEADQUARTERS PROGRAM OFFICES AND REFLECTS THEIR CRITERIA FOR EACH OF THE ABOVE CATEGORIES.

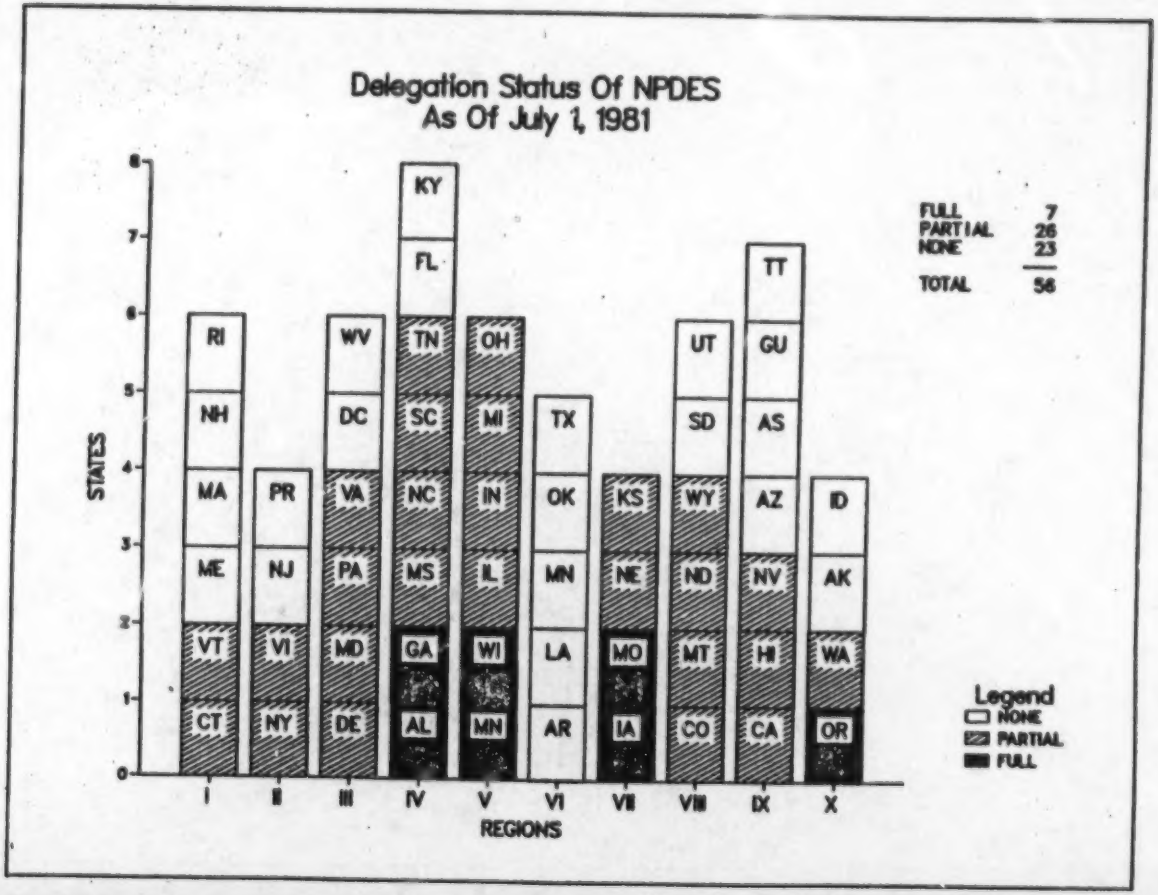
ALL NINE PROGRAMS
Status Of Delegation – Nationwide
As Of July 1, 1981
FULL
20.0%
PARTIAL
28.0%
NONE
52.0%


DELEGATION STATUS OF ALL PROGRAMS
BY REGIONS
As Of July 1, 1981
Legend
FULL
PARTIAL
NONE
PERCENT DELEGATED
100
90
80
70
60
50
40
30
20
10
0
I
II
III
IV
V
VI
VII
VIII
IX
X
REGIONS

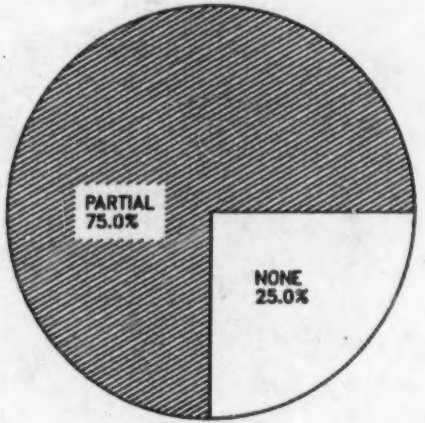
NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM
Status Of Delegation – NATIONWIDE
As Of July 1, 1981

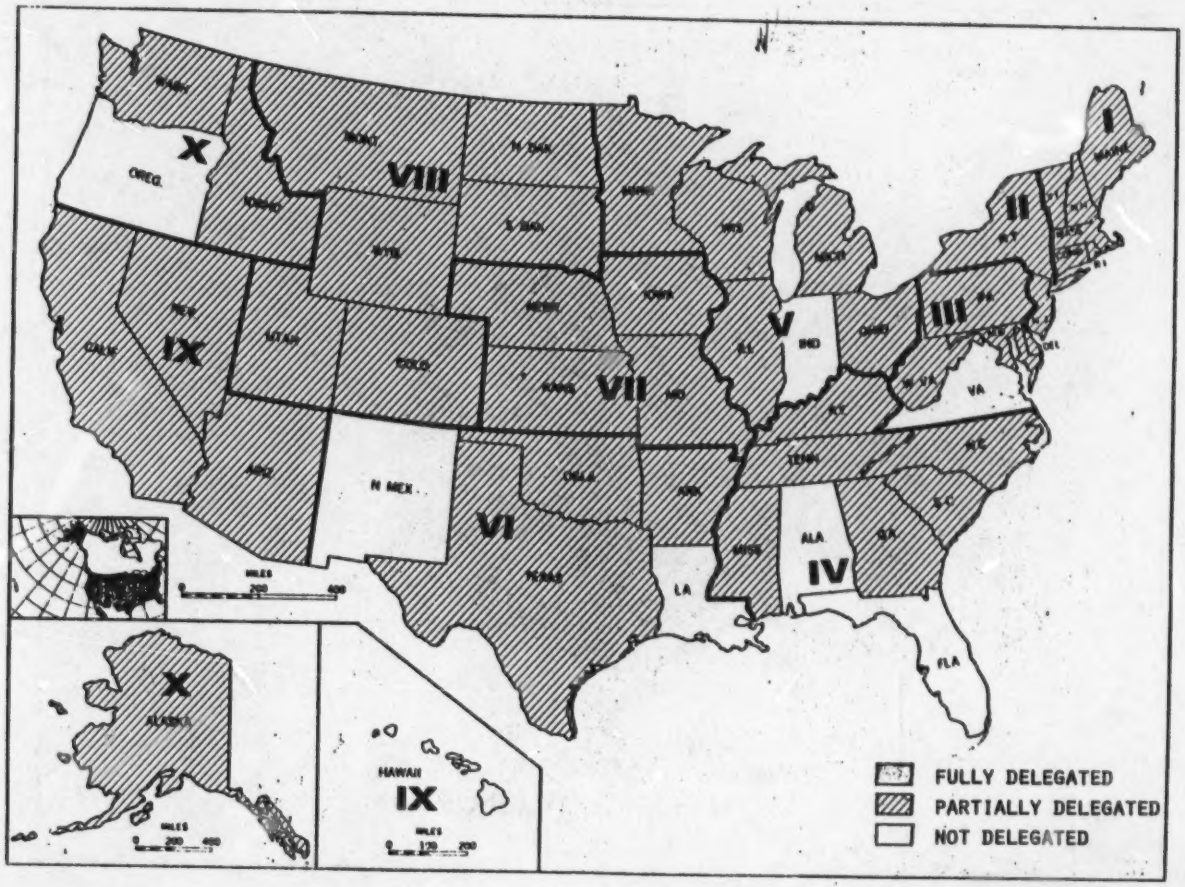


FULLY DELEGATED
PARTIALLY DELEGATED
NOT DELEGATED
NPDES PERMITS
I
II
III
IV
V
VI
VII
VIII
IX
X
TEXAS
ALASKA
HAWAII
FLA
N MEX
UTAH
ARIZ
COLO
N DAK
S DAK
NEBR
KANS
OKLA
ARK
LA
MISS
ALA
GA
S C
N C
TENN
KY
W VA
VA
PA
MD
DEL
N J
N Y
MASS
R I
CONN
VT
N H
MAINE
MICH
WIS
MINN
IOWA
MO
ILL
IND
OHIO
N DAK
S DAK
NEBR
KANS
OKLA
TEXAS
MONT
IDAHO
WYO
COLO
N MEX
ARIZ
UTAH
NEV
WASH
OREG
CALIF
ALASKA
HAWAII
MILES


Delegation Status Of NPDES
As Of July 1, 1981
STATES
REGIONS
I
II
III
IV
V
VI
VII
VIII
IX
X
RI
NH
MA
ME
VT
CT
PR
NJ
VI
NY
WV
DC
VA
PA
MD
DE
KY
FL
TN
SC
NC
MS
GA
AL
OH
MI
IN
IL
WI
MN
TX
OK
MN
LA
AR
KS
NE
MO
IA
UT
SD
WY
ND
MT
CO
TT
GU
AS
AZ
NV
HI
CA
ID
AK
WA
OR
FULL 7
PARTIAL 26
NONE 23
TOTAL 56
Legend
NONE
PARTIAL
FULL

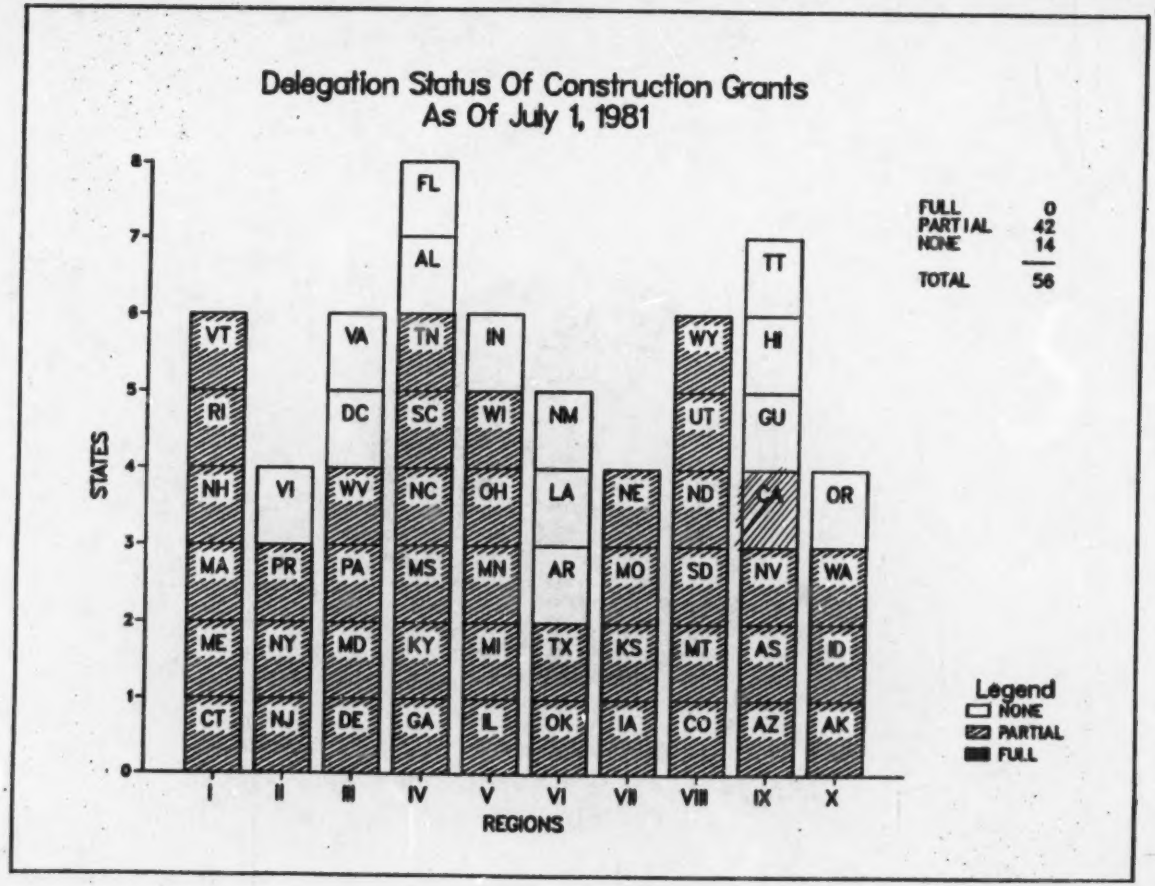
CONSTRUCTION GRANTS
Status Of Delegation – NATIONWIDE
As Of July 1, 1981



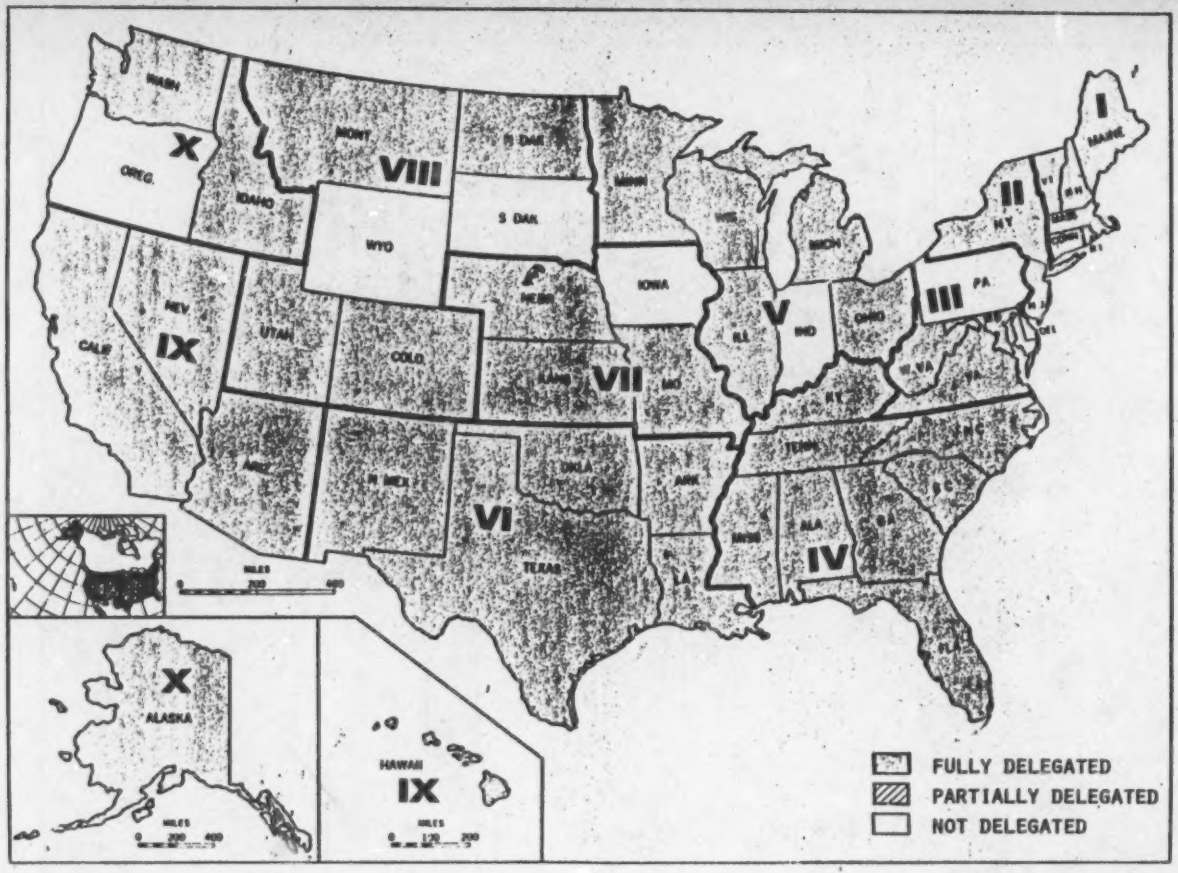


CONSTRUCTION GRANTS

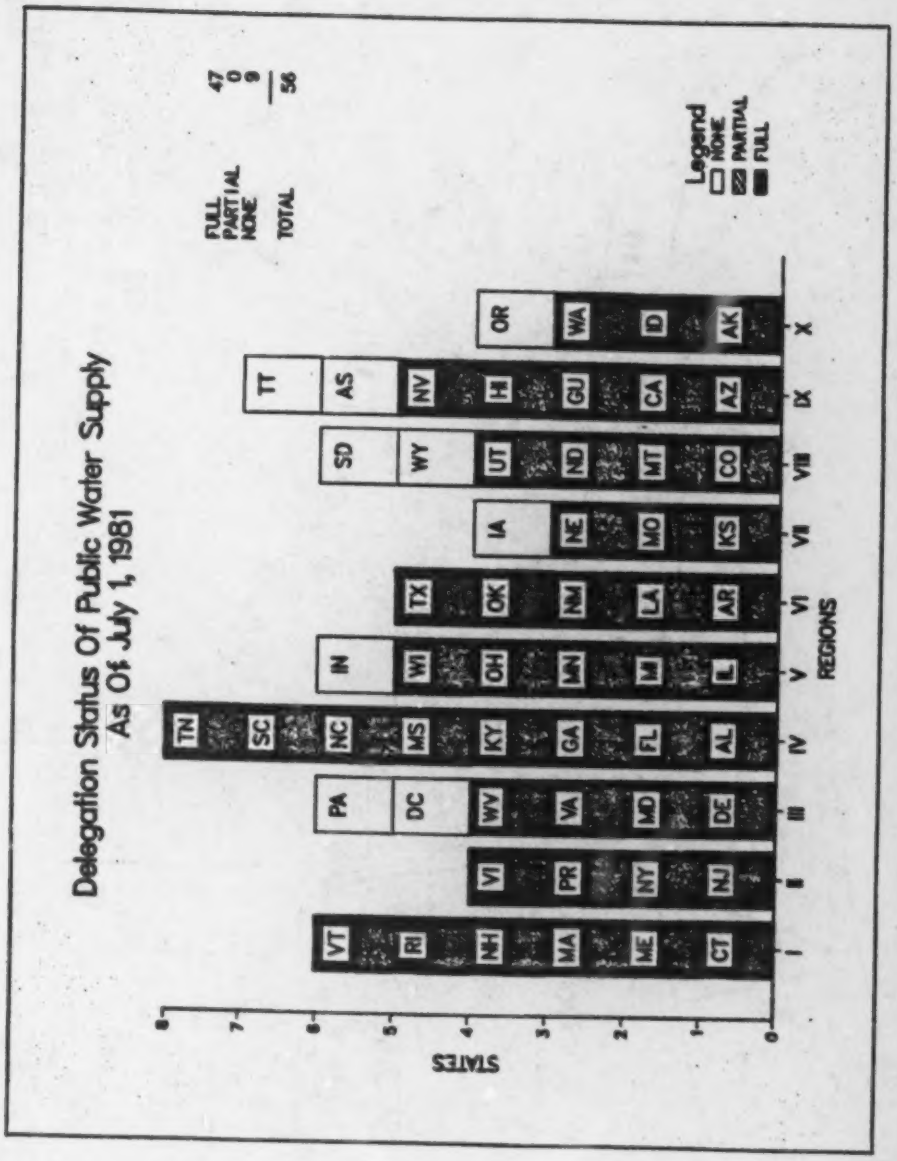
N.B. Arkansas is non-delegated


Delegation Status Of Construction Grants
As Of July 1, 1981
STATES
REGIONS
I
II
III
IV
V
VI
VII
VIII
IX
X
VT
RI
NH
MA
ME
CT
VI
PR
NY
NJ
VA
DC
WV
PA
MD
DE
FL
AL
TN
SC
NC
MS
KY
GA
IN
WI
OH
MN
MI
IL
NM
LA
AR
TX
OK
NE
MO
KS
IA
WY
UT
ND
SD
MT
CO
TT
HI
GU
CA
NV
AS
AZ
OR
WA
ID
AK
FULL 0
PARTIAL 42
NONE 14
TOTAL 56
Legend
NONE
PARTIAL
FULL

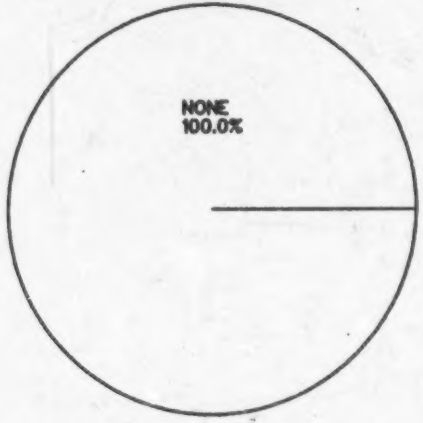
PUBLIC WATER SUPPLY
Status Of Delegation – NATIONWIDE
As Of July 1, 1981

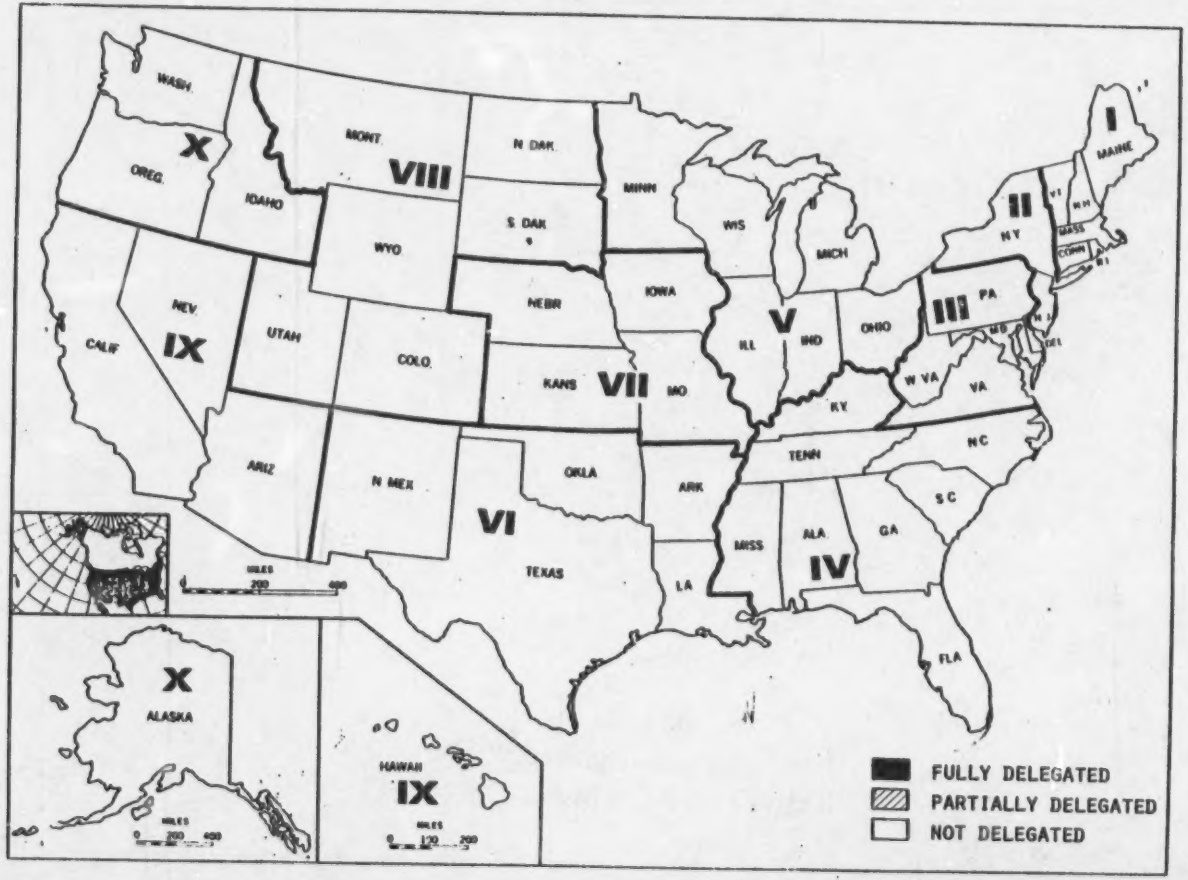


PUBLIC WATER SUPPLY


Delegation Status Of Public Water Supply
As Of July 1, 1981
FULL 47
PARTIAL 0
NONE 9
TOTAL 56
Legend
NONE
PARTIAL
FULL
STATES
REGIONS
I
II
III
IV
V
VI
VII
VIII
IX
X
CT ME MA NH RI VT
NJ NY PR VI
DE MD VA WV DC PA
AL FL GA KY MS NC SC TN
IL MI MN OH WI IN
AR LA NM OK TX
KS MO NE IA
CO MT ND UT WY SD
AZ CA GU HI NV AS TT
AK ID WA OR

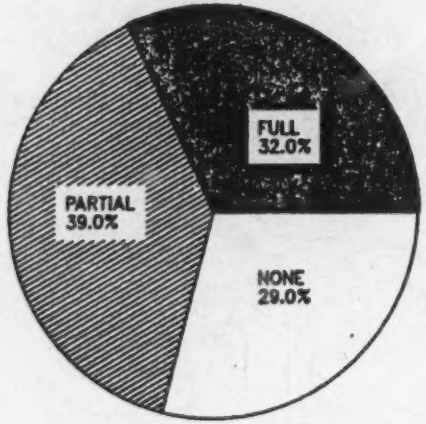
UNDERGROUND INJECTION CONTROL
Status Of Delegation – NATIONWIDE
As Of July 1, 1981

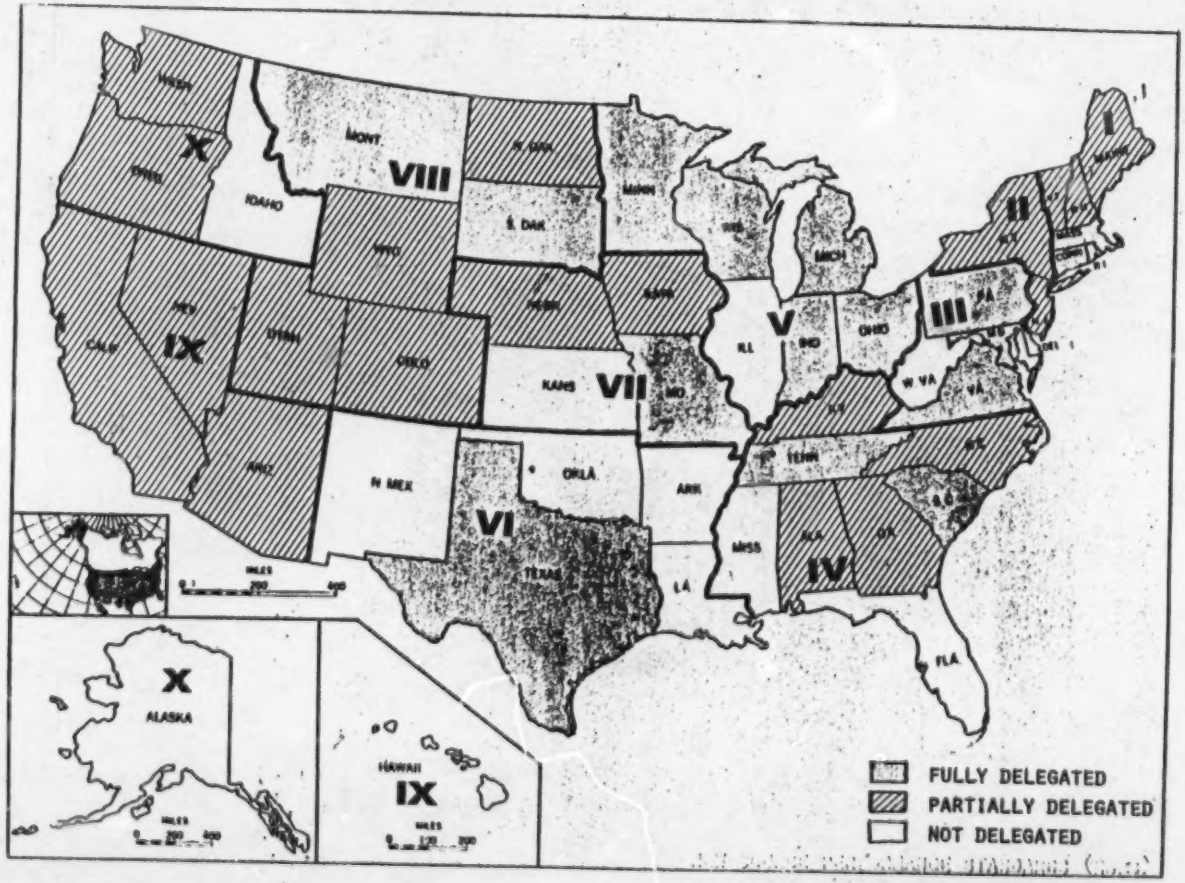




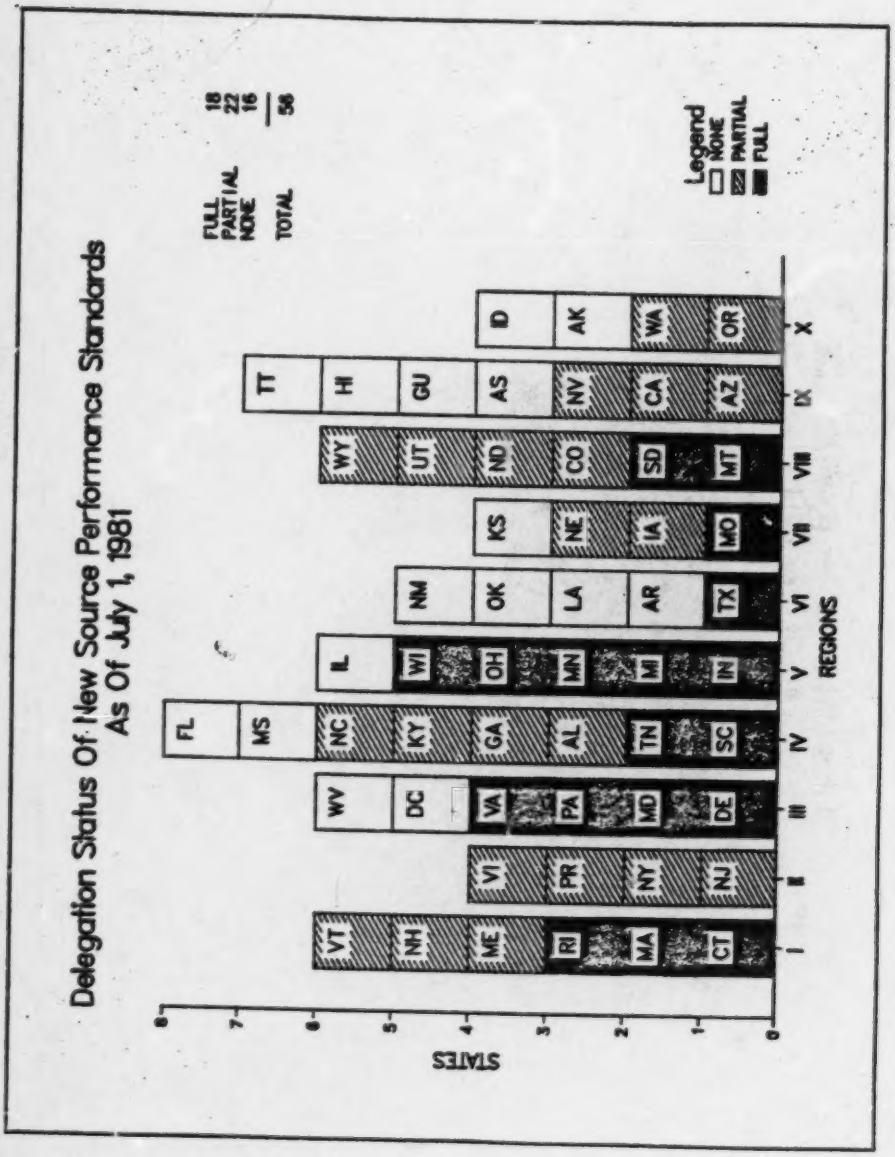
UNDERGROUND INJECTION CONTROL (UIC)

NEW SOURCE PERFORMANCE STANDARDS
Status Of Delegation – NATIONWIDE
As Of July 1, 1981

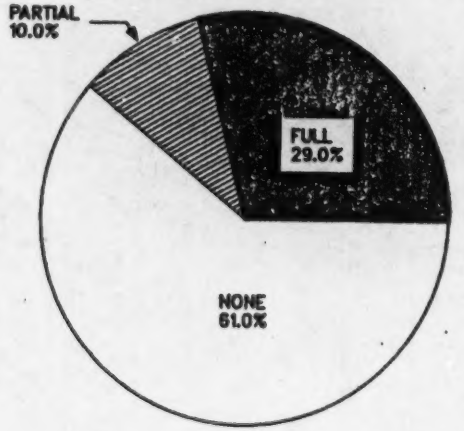


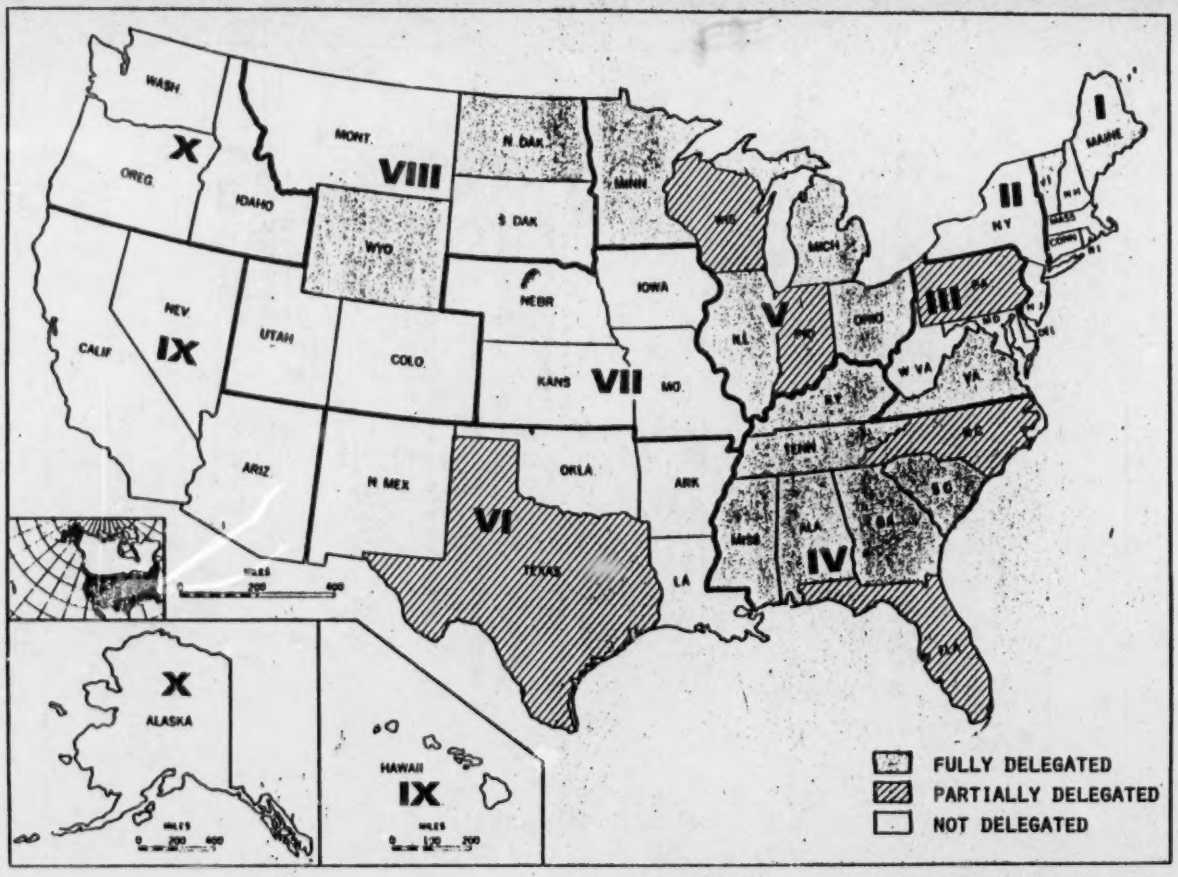


NEW SOURCE PERFORMANCE STANDARDS (NSPS)

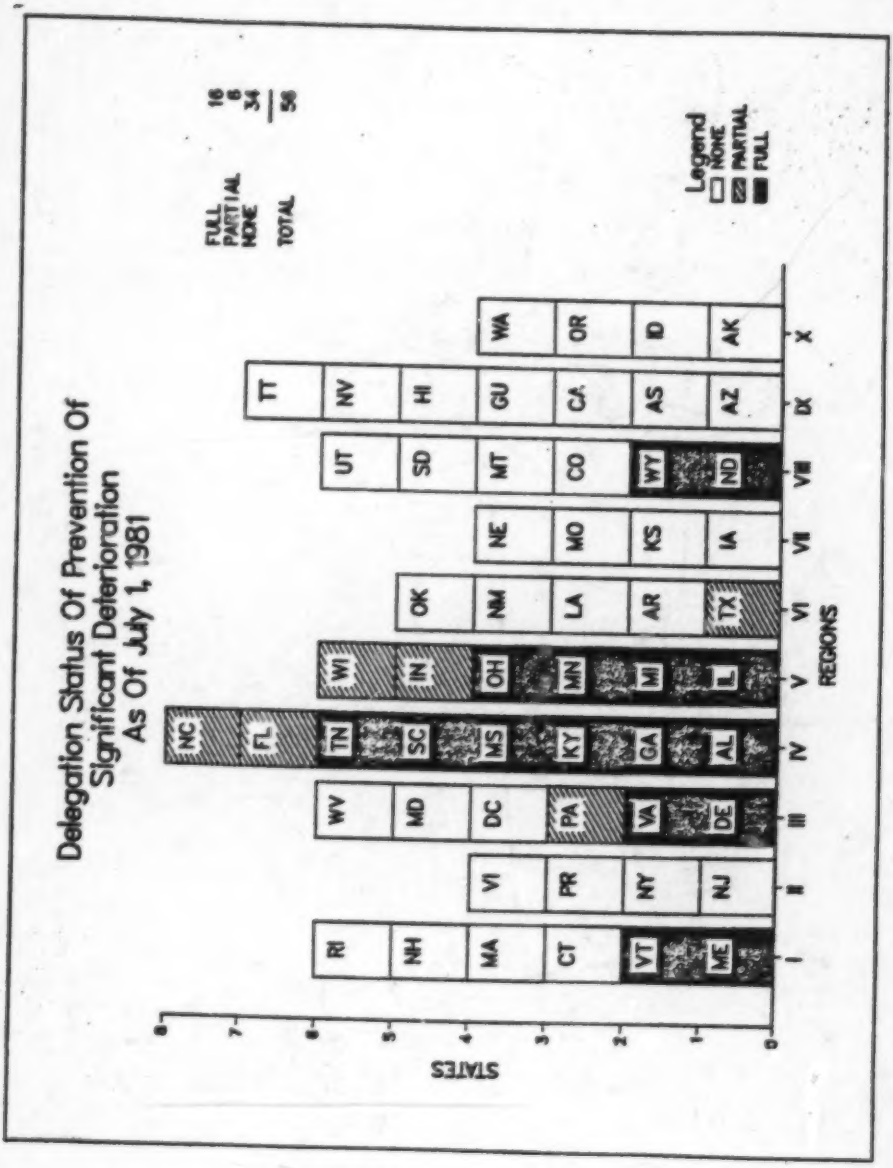

Delegation Status Of New Source Performance Standards
As Of July 1, 1981
FULL 18
PARTIAL 22
NONE 16
TOTAL 56
Legend
NONE
PARTIAL
FULL
STATES
REGIONS
I
II
III
IV
V
VI
VII
VIII
IX
X
VT NH ME RI MA CT
VI PR NY NJ
WV DC VA PA MD DE
FL MS NC KY GA AL TN SC
IL WI OH MN MI IN
NM OK LA AR TX
KS NE IA MO
WY UT ND CO SD MT
TT HI GU AS NV CA AZ
ID AK WA OR

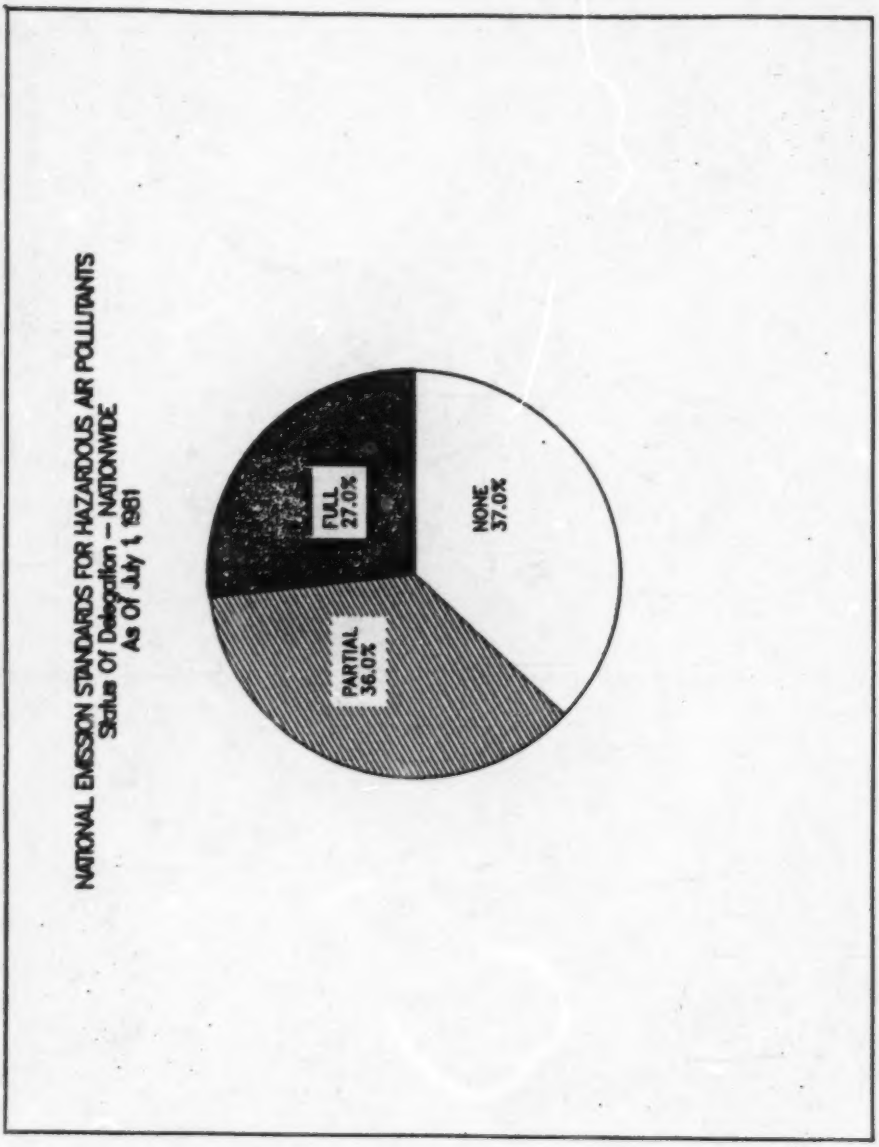
PREVENTION OF SIGNIFICANT DETERIORATION
Status Of Delegation – NATIONWIDE
As Of July 1, 1981



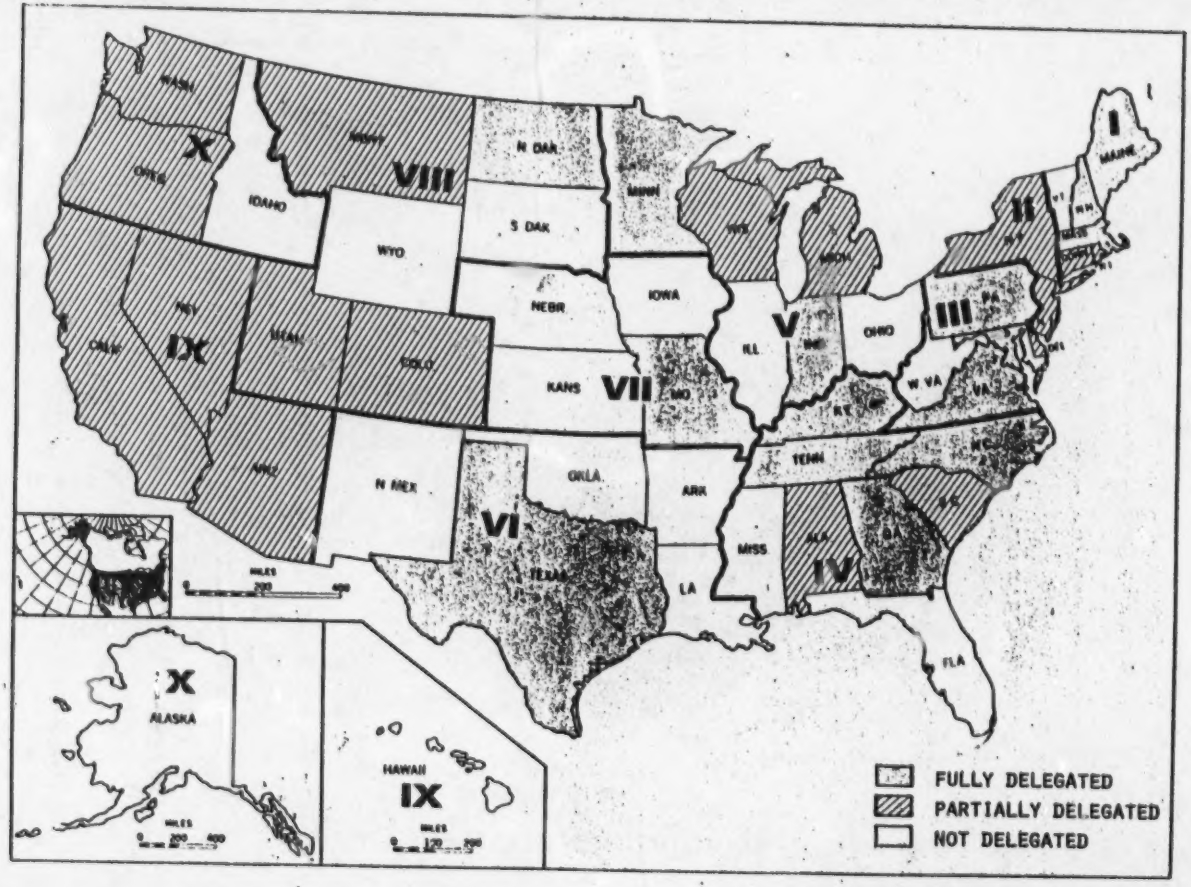


PREVENTION OF SIGNIFICANT DETERIORATION (PSD)

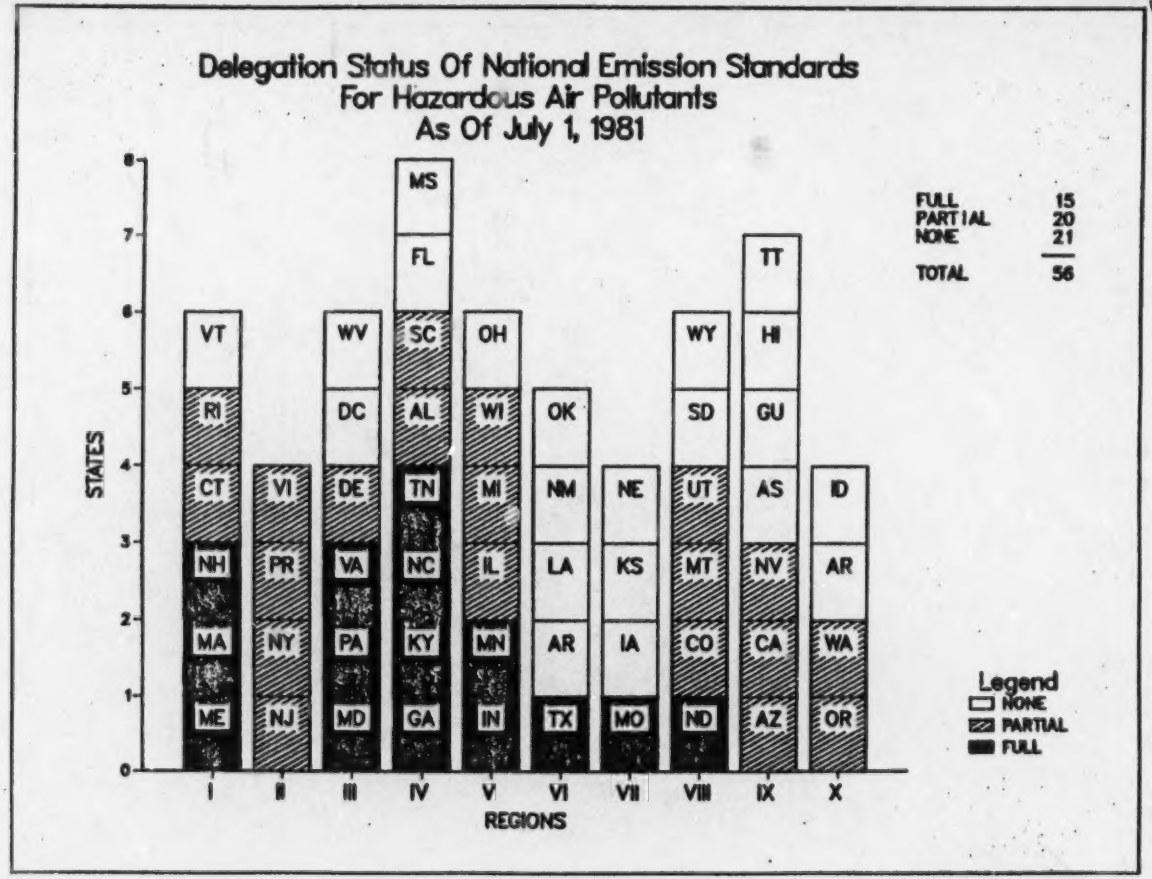

Delegation Status Of Prevention Of
Significant Deterioration
As Of July 1, 1981
FULL 16
PARTIAL 6
NONE 34
TOTAL 56
Legend
NONE
PARTIAL
FULL
STATES
REGIONS
I
II
III
IV
V
VI
VII
VIII
IX
X
RI NH MA CT VT ME
VI PR NY NJ
WV MD DC PA VA DE
NC FL TN SC MS KY GA AL
WI IN OH MN MI IL
OK NM LA AR TX
NE MO KS IA
UT SD MT CO WY ND
TT NV HI GU CA AS AZ
WA OR ID AK
0 1 2 3 4 5 6 7


NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
Status Of Delegation – NATIONWIDE
As Of July 1, 1981
FULL
27.0%
NONE
37.0%
PARTIAL
36.0%

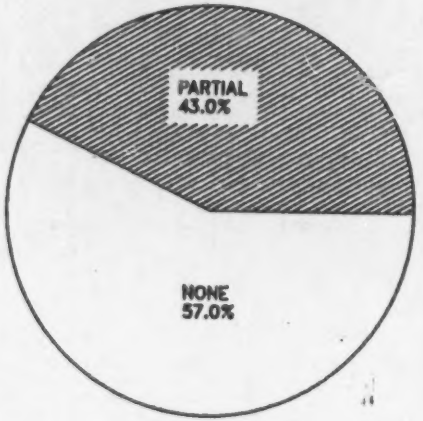
94-034 O - 82 - 15

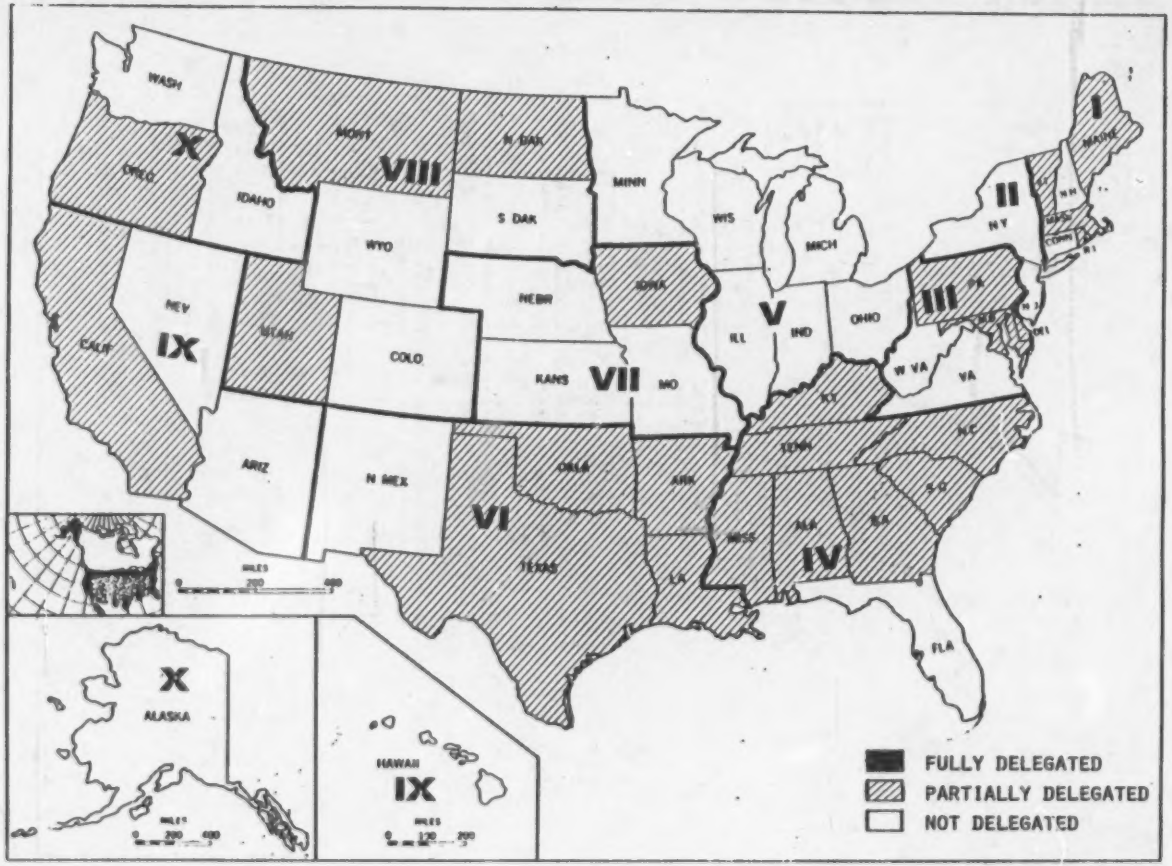


HAZARDOUS POLLUTANTS (NESHAPS)

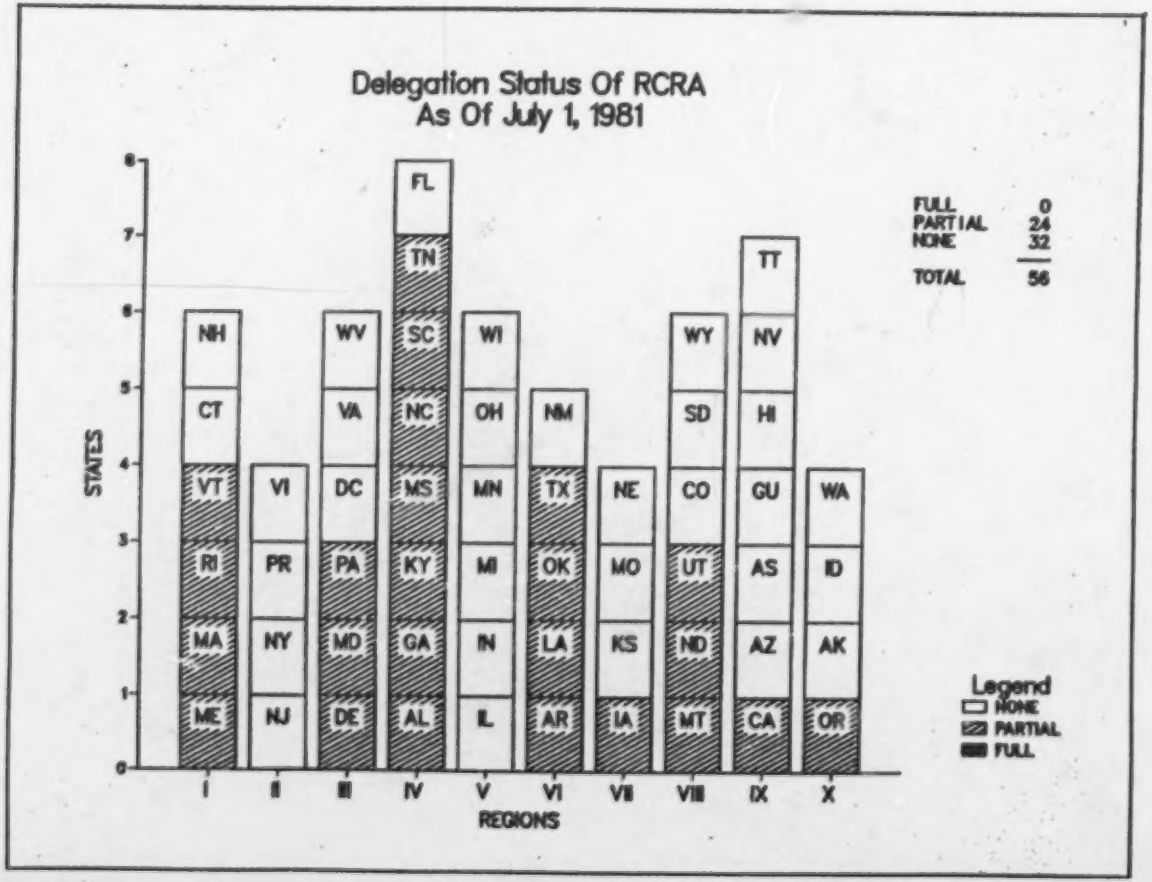

Delegation Status Of National Emission Standards
For Hazardous Air Pollutants
As Of July 1, 1981
STATES
REGIONS
I
II
III
IV
V
VI
VII
VIII
IX
X
VT
RI
CT
NH
MA
ME
VI
PR
NY
NJ
WV
DC
DE
VA
PA
MD
MS
FL
SC
AL
TN
NC
KY
GA
OH
WI
MI
IL
MN
IN
OK
NM
LA
AR
TX
NE
KS
IA
MO
WY
SD
UT
MT
CO
ND
TT
HI
GU
AS
NV
CA
AZ
ID
AR
WA
OR
FULL 15
PARTIAL 20
NONE 21
TOTAL 56
Legend
NONE
PARTIAL
FULL

RCRA
Status Of Delegation – NATIONWIDE
As Of July 1, 1981

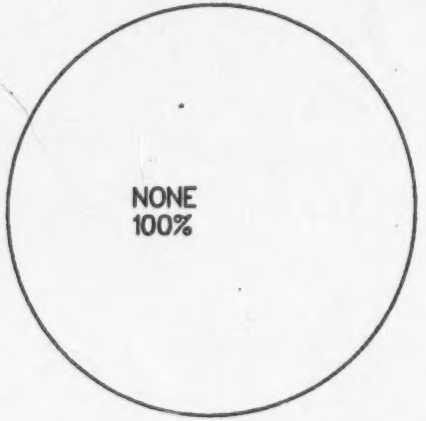


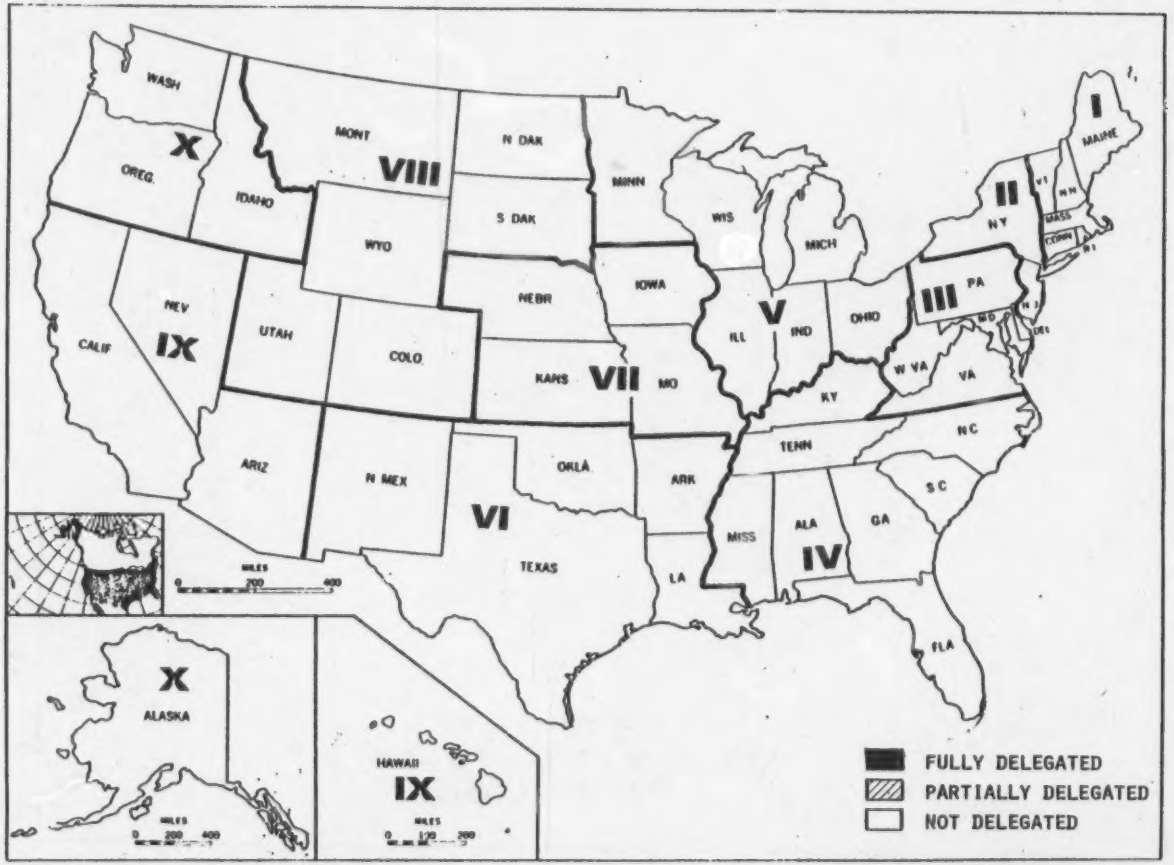


SOLID WASTE (RCRA)


Delegation Status Of RCRA
As Of July 1, 1981
STATES
REGIONS
I
II
III
IV
V
VI
VII
VIII
IX
X
ME
VT
NH
MA
RI
CT
NJ
NY
PR
VI
DE
MD
PA
DC
VA
WV
AL
GA
KY
MS
NC
SC
TN
FL
IL
IN
MI
MN
OH
WI
AR
LA
OK
TX
NM
IA
KS
MO
NE
MT
ND
SD
WY
CA
AZ
UT
CO
NV
HI
GU
AS
TT
OR
AK
ID
WA
FULL 0
PARTIAL 24
NONE 32
TOTAL 56
Legend
NONE
PARTIAL
FULL

DREDGE AND FILL
Status Of Delegation – NATIONWIDE
As Of July 1, 1981





DREDGE OR FILL (§404)

Programs' Status of Delegation

[% of States]

	Full Delegation	Partial Delegation	Not Delegated
Construction Grants	0	75	25
Public Water Supply	82	0	12
Underground Injection	0	0	100
NPDES Permits	11	48	41
Water Programs Overall	23	31	46
New Source Performance Standards	32	39	29
Prevention of Significant Deterioration	29	10	61
Hazardous Pollutants	29	10	61
Air Programs Overall	29	29	42
RCRA	0	43	57
Dredge and Fill	0	0	100

Regional Status of Delegation

[% of Region]

		Construction Grants	Public Water Supply	Underground Injections	NPDES Permits	New Source Performance Standards	Prevention of Significant Deterioration	NESHAPS Hazardous Pollutants	RCRA	Dredge and Fill	Regional Overall
REGION I (6 States)	Full	0%	100		0	50	33	50	0		26
	Partial	100%	0		33	50	0	33	67		31
	None	0%	0		67	0	67	17	33		43
REGION II (4 States)	Full	0%	100		0	0	0	0	0		11
	Partial	75%	0		50	100	0	100	0		36
	None	25%	0		50	0	100	0	100		53
REGION III (6 States)	Full	0%	67		0	67	33	50	0		23
	Partial	67%	0		67	0	17	17	50		23
	None	33%	33		33	33	50	33	50		52
REGION IV (8 States)	Full	0%	100	NONE	25	25	75	50	0	NONE	31
	Partial	75%	0		50	50	25	25	88		35
	None	25%	0		25	25	0	25	12		35
REGION V (6 States)	Full	0%	67		17	83	67	33	0		29
	Partial	83%	0		83	0	33	50	0		28
	None	17%	33		0	17	0	17	100		43
REGION VI (5 States)	Full	0%	100		0	20	0	20	0		16
	Partial	40%	0		0	0	20	0	80		16
	None	60%	0		100	80	80	80	20		69
REGION VII (4 States)	Full	0%	75		50	25	0	25	0		19
	Partial	100%	0		50	50	0	0	25		25
	None	0%	25		0	25	100	75	75		56
REGION VIII (6 States)	Full	0%	67		0	33	33	17	0		17
	Partial	100%	0		67	67	0	50	50		37
	None	0%	33		33	0	67	33	50		46
REGION IX (7 States)	Full	0%	71		0	0	0	0	0		8
	Partial	43%	0		43	43	0	43	14		21
	None	57%	29		57	57	100	57	86		71
REGION X (4 States)	Full	0%	75		25	0	0	0	0		11
	Partial	75%	0		25	50	0	50	25		25
	None	25	25		50	50	100	50	75		64

DELEGATION STATUS SUMMARY
AS OF JULY 1, 1981

	WATER				AIR			SOLID WASTE	OF
	Construction Grants	Public Water Supply (PWS)	Underground Injections (UIC)	NPDES Permits	New Source Performance Standards (NSPS)	Prevention of Significant Deterioration (PSD)	Hazardous Pollutants (NESHAPS)	RCRA	* Dredge or Fill (§40
AL	N	F	N	F	P	F	P	P	N
AK	P	F	N	N	N	N	N	N	N
AZ	P	F	N	N	P	N	P	N	N
AR	N	F	N	N	N	N	N	P	N
AS	N	N	N	N	N	N	N	N	N
CA	P	F	N	P	P	N	P	P	N
CO	P	F	N	P	P	N	P	N	N
CT	P	F	N	P	F	N	P	N	N
DE	P	F	N	P	F	F	P	P	N
DC	N	N	N	N	N	N	N	N	N
FL	N	F	N	N	N	P	N	N	N
GA	P	F	N	F	P	F	F	P	N
GU	N	F	N	N	N	N	N	N	N
HI	N	F	N	P	N	N	N	N	N
ID	P	F	N	N	N	N	N	N	N

Code: N - Not Delegated
P - Partially Delegated
F - Fully Delegated
According to the program's criteria ~~(n.b. describe program's criteria)~~

* Dredge or Fill (Sec. 404, Clean Water Act)

AS OF JULY 1, 1981

	WATER				AIR			SOLID WASTE	OF
	Construction Grants	Public Water Supply (PWS)	Underground Injections (UIC)	NPDES Permits	New Source Performance Standards (NSPS)	Prevention of Significant Deterioration (PSD)	Hazardous Pollutants (NESHAPS)	RCRA	*Dredge or Fill ($40
IL	P	F	N	P	N	F	P	N	N
IN	N	N	N	P	F	P	F	N	N
IA	P	N	N	F	P	N	N	P	N
KS	P	F	N	P	N	N	N	N	N
KY	P	F	N	N	P	F	F	P	N
LA	N	F	N	N	N	N	N	P	N
ME	P	F	N	N	P	F	F	P	N
MD	P	F	N	P	F	N	F	P	N
MA	P	F	N	N	F	N	F	P	N
MI	P	F	N	P	F	F	P	N	N
MN	P	F	N	F	F	F	F	N	N
MS	P	F	N	P	N	F	N	P	N
MO	P	F	N	F	F	N	F	N	N
MT	P	F	N	P	F	N	P	P	N
NE	P	F	N	P	P	N	N	N	N

Code: N - Not Delegated
P - Partially Delegated
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According to the program's criteria (n.b. describe program's criteria)

* Dredge or Fill (Sec. 404, Clean Water Act)

DELEGATION STATUS SUMMARY
AS OF JULY 1, 1981

	WATER				AIR			SOLID WASTE	O
	Construction Grants	Public Water Supply (PWS)	Underground Injections (UIC)	NPDES Permits	New Source Performance Standards (NSPS)	Prevention of Significant Deterioration (PSD)	Hazardous Pollutants (NESHAPS)	RCRA	Dr F ($
NV	P	F	N	P	P	N	P	N	N
NH	P	F	N	N	P	N	P	N	N
NJ	P	F	N	N	P	N	P	N	N
NM	N	F	N	N	N	N	N	N	N
NY	P	F	N	P	P	N	P	N	N
NC	P	F	N	P	P	P	F	P	N
ND	P	F	N	P	P	F	F	P	N
OH	N	F	N					N	N
OK	P	F	N	P	F	F	N	N	N
OR	P	F	N	N	N	N	N	P	N
PA	N	N	N	F	P	N	P	P	N
PR	P	N	N	P	F	P	F	P	N
RI	P	F	N	N	P	N	P	N	N
SC	P	F	N	N	F	N	P	P	N
	P	F	N	P	F	F	P	P	N

Code: N - Not Delegated
P - Partially Delegated
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According to the program's criteria (n.b. describe program's criteria)

* Dredge or Fill (Sec. 404, Clean Water Act)

DELEGATION STATUS SUMMARY
AS OF JULY 1, 1981

	WATER				AIR			SOLID WASTE	O
	Construction Grants	Public Water Supply (PWS)	Underground Injections (UIC)	NPDES Permits	New Source Performance Standards (NSPS)	Prevention of Significant Deterioration (PSD)	Hazardous Pollutants (NESHAPS)	RCRA	* Dre c Fi ($4
SD	P	N	N	N	F	N	N	N	N
TN	P	F	N	P	F	F	F	P	N
TT	N	N	N	N	N	N	N	N	N
TX	P	F	N	N	F	P	F	P	N
UT	P	F	N	N	P	N	P	P	N
VT	P	F	N	P	P	F	N	P	N
VA	N	F	N	P	F	F	F	N	N
VI	N	F	N	P	P	N	P	N	N
WA	P	F	N	P	P	N	P	N	N
WV	P	F	N	N	N	N	N	N	N
WI	P	F	N	F	F	P	P	N	N
WY	P.	N	N	P	P	F	N	N	N

Code: N - Not Delegated
P - Partially Delegated
F - Fully Delegated
According to the program's criteria (n.b. describe program's criteria)

* Dredge or Fill (Sec. 404, Clean Water Act)